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THE NETHERLANDS ARMY
AND
THE CHIEF OF STAFF OF
THE PORTUGUESE ARMY

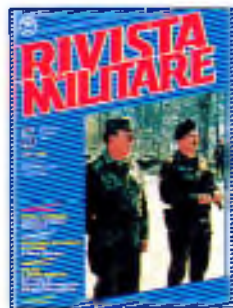
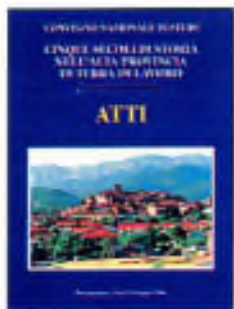
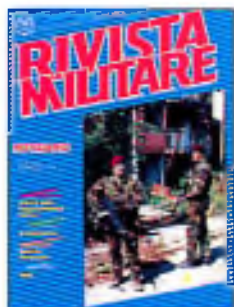
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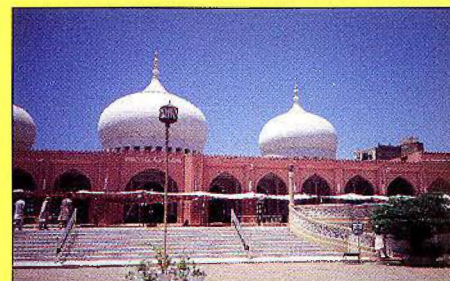
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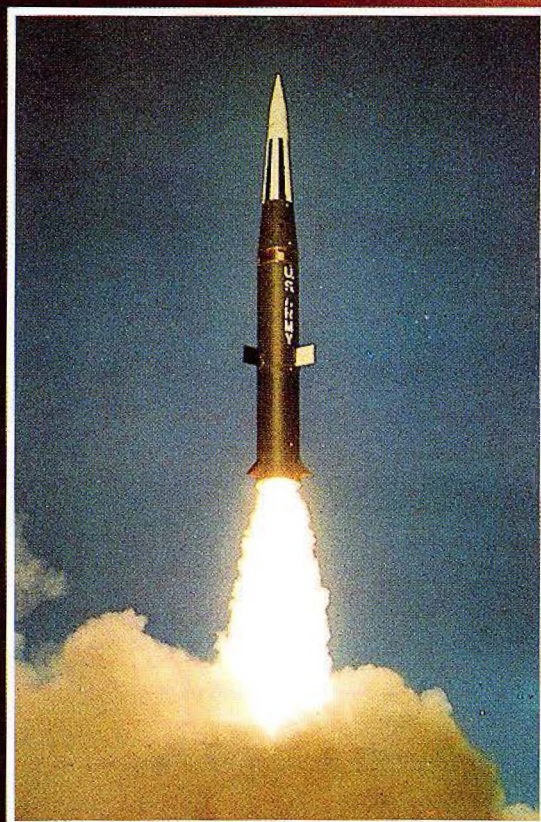
STRATEGIC BALANCES

RISKS OF DESTABILIZATION

by Luigi Semprini *

Many countries of North Africa, the Middle East and Central Asia have started to look with renewed interest at the weapons of mass destruction in order to regain geostrategic weight.

For the moment the arms concerned are chemical and perhaps also bacteriological warheads that can be installed on missiles, air and artillery vehicles. It is an alarm - bell for the Western countries which are called to a common policy of counter-proliferation based on talks and cooperation. This is the only way to prevent dangerous frictions whose reflections can threaten the continental security and prosperity.





THE EMERGING RISKS

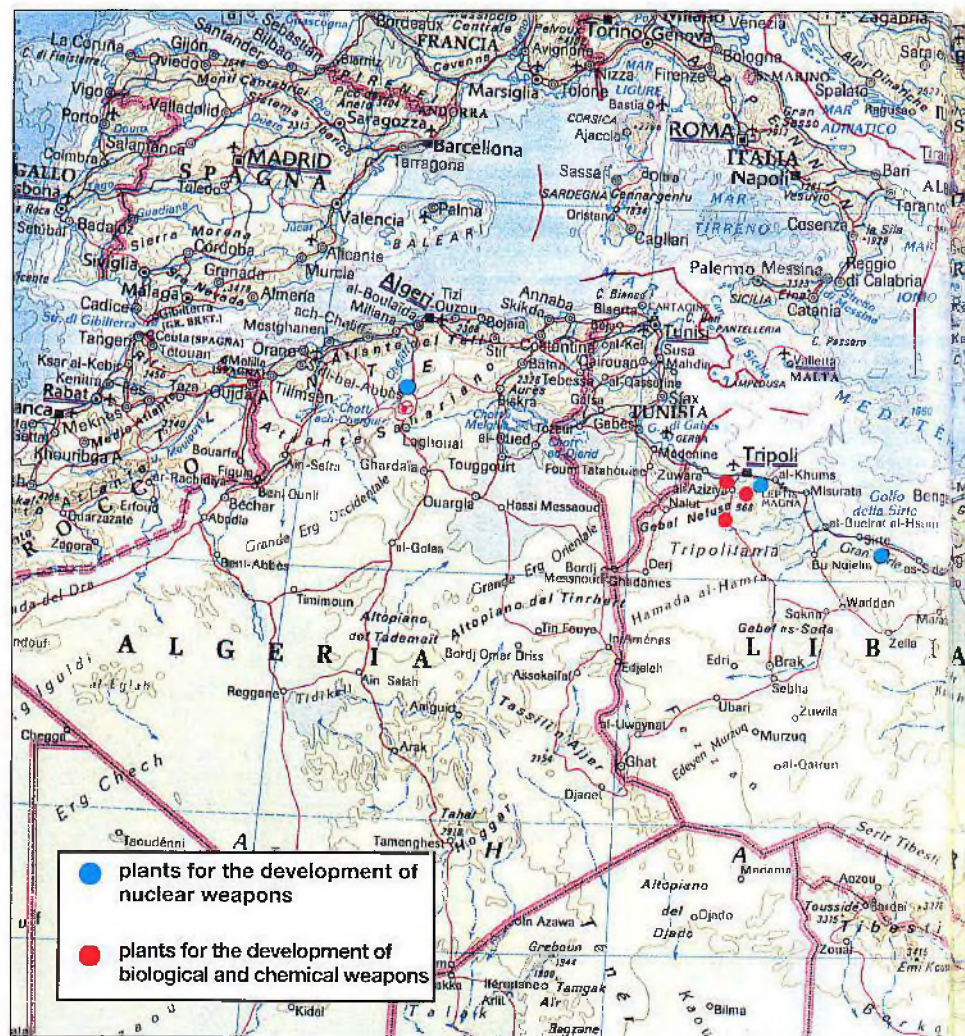
Within the "post cold-war" international community a sense of allergy to armaments seemed to prevail, especially to the so-called weapons of mass destruction (WMD); the nuclear arsenals of the two superpowers were drastically reduced and disarmament agreements were concluded that up to then had been unthinkable (START II - Strategic Arms Reduction Talks, CFE - Conventional Forces in Europe, CTBT - Comprehensive Test Ban Treaty, CWC - Chemical Weapons Convention, etc.).

But these encouraging acts of detente were met by only a few cases of repentance by the countries that up to then had been interested in the acquisition of WMD (South Africa, Argentina, Brazil), while most of the proliferator countries preferred to continue the development of the respective programmes of non-conventional armaments and of delivery systems with increasingly long range; various states within the strip that goes from Morocco to Pakistan were to be included among them.

On the contrary, during the nineties the proliferation impulses tend to increase causing destabilizing effects also outside the regional sphere, as it happened during the Gulf War. In fact, the discovery of the Iraqi nuclear programme and the mere threat of the employment of biological and chemical weapons, that could be delivered by "Scud" missiles, hinted at the risks to which the strategic balances were exposed also outside the Middle East area.

On that occasion, an indefinite sense of danger on the southern flank of NATO started to be perceived (less indefinite in Turkey).

The prospects of an increasing exposure of NATO countries to the risks of WMD proliferation coming from the south now reduce the traditional distinction between the European and Middle-East



security and emphasize their interdependence with the outcome that the possibilities of intervention of the US forces in the Middle East (like the Gulf War) and in South East Asia are more affected by their freedom of access to the bases and air space of the South-European countries. If the latter become more vulnerable to retaliations, the talks with extra-European countries on cooperation tend to become more difficult, or at least to entail higher political and military costs; in any case the European component of the Alliance must be capable of participating more actively in the defence of the West's interests in the Gulf acquiring higher deterrence capabilities against the risks of WMD.

There is a need for the West to find a proper answer apt to

phlegmatize the present and potential tensions within the strategic environment of Europe's southern periphery.

Besides those regarding the Arab-Israeli dispute, we can list the tensions deriving from:

- subversive Islamic actions in Algeria and Egypt;
 - anti-West terrorism supported by some Maghreb and Middle-East countries;
 - latent conflicts between Morocco and Algeria, Libya and Tunisia, Libya and Egypt;
 - antagonism between Iraq and Iran for hegemony in the Gulf area;
 - contrasts between Turkey and some bordering countries (Syria, Iraq and Iran);
 - Morocco's claims on the Spanish enclaves of Ceuta and Melilla.
- The proliferator countries of



the region want to achieve significant potentialities capable of affecting this accumulation of tensions, influencing the relations with the West, and replacing, with new forms of geo-political weight, the advantages of the old patronages of "cold war" and non-alignment.

A Mediterranean obscured by the risks of WMD could become the stage of conflicts along the North-South axis but also of dialogue; both must be faced by applying in a new manner the traditional concepts of stability and deterrence.

INSTABILITY RISKS

The change occurred within the strategic balances of the area can be noticed from the analysis of the multiplicity of the internal

and external challenges which may have stimulated the wish to possess WMD, as well as the factors which affect the acquisition of such weapons.

Some countries, traditionally inclined to disturb the security of the region (Libya, Syria and Iraq) which in the past could count on the political and material support of the Soviet Union, in the nineties have found themselves without a protective deterrent and were compelled to rely exclusively on their own political and military power in order to pursue their regional ambitions; and the same was for the states that were already in a non-aligned position (like Algeria and post-revolutionary Iran) which could acquire strength of strategic value confiding on the antagonism of US and USSR interests.

The Soviet connections with the Middle East, intended to guarantee the security - like that granted by Khrushchev in 1956 during the Suez crisis - had in fact a stabilizing function in the area. Moscow would not have permitted Saddam Hussein to invade Kuwait and prime an escalation of risks.

Lacking a "linkage" for the security and foreign policy, many countries of the Middle East and North Africa try to recover geo-strategic weight looking with renewed interest to WMD, albeit showing themselves sensitive, at least in appearance, to the positive political initiatives, such as for example the proposal to establish the Arab Union of Maghreb (between Mauritania, Morocco, Algeria, Tunisia and Libya).

In order to draw the West's attention on the questions of



US-made "THAAD" system for the defence against ballistic missiles and the protection of US Units deployed abroad.

regional security and start a diplomatic blackmail aimed at obtaining strategic assurances, some countries, like Algeria, betray their interest for nuclear weapons by boasting about enigmatic programmes for the development of nuclear energy for peaceful purposes.

The international supplies of WMD and relevant technologies, as well as the common programmes for the development of the weapons, can be founded on strategic alliances between various regions or on simple agreements, sometimes of uncertain duration or indeed limited to contingent commercial interests. In the relations between the most important Arab-Muslim proliferators and the East-Asian exporters of nuclear and missile materials and technologies, the commercial interests apparently win over political opportunism: despite every possible agreement, armaments of all kinds are bartered against oil supplies.

Were the relations between Islam and West to deteriorate to the point of assuming the aspect of a widespread clash between civilizations, the risk is that the acquisition of any type of WMD could be legitimized in the name of the Islamic cause. This would make problematic any possible western intervention in a new crisis against

a country which could count on the solidarity of brother Arab-Muslim countries armed with nuclear weapons and ballistic missiles with a wide range of action.

On the other hand a scheme of cooperation between the West and the Arab-Muslim world based on coercive diplomacy as regards WMD could prove fragile in the long run, and such as to seriously complicate the European and American choices in cases of crisis. Obstinate proliferators like Libya and Iran could take advantage of WMD with a view to establishing international agreements - limited and temporary as they may be - convenient for strengthening their political power with the hidden intent to acquire by all means non-conventional devices and transregional delivery systems.

They can credit their dual-use programmes in the nuclear, chemical and airspace fields as necessary initiatives for peacekeeping and for the improvement of the technological level of the Arab-Muslim world and for the Third World in general, obtaining moreover a favourable spin-off as regards image in the international field.

The countries of the Western Alliance could explore the possibility of controlling the proliferative impulses of the area

through a policy of technological cooperation with the Arab-Muslim countries, based on the acceptance of calculated risk. Today the risk is perhaps too high but it cannot be excluded that it may become acceptable sooner or later.

THE REGIONAL TENSIONS

In the short term the proliferative dynamics can be affected by factors of regional security linked with the geopolitical reality of the states and especially of those that have to face internal and external challenges which cause insecurity and the militarization of society. In such a framework any proliferative option or impulse can be a foreboding of unfathomable risks.

On the Mediterranean southern shore, pro-west Morocco up to now has shown indifference to WMD, despite its bordering with an Algeria very much engaged in nuclear and missile military programmes and with which has often found itself in contrast for border disputes and for the support given to the rebels in Western Sahara.

It can be surmised that the Moroccan position could change if in Algiers the present Islamic integralism, undoubtedly disruptive for the regional security, were to prevail. If this happens, Rabat will have to rely less on its friendship with the West, and equip itself with a non-conventional air-missile response capability comparable to the dangerousness of the nationalist-Islamic Algerian challenge; only the doubt arises that Morocco should avail itself of its new military capabilities in the contention with Spain for the Ceuta and Melilla enclaves. Algeria has always wanted to obtain the position of dominant power in

BALLISTIC MISSILES										
Type	Mobility	Guiding System	CEP m	Range km	Warheads weight (kg)	Number of missiles				
						Libya	Egypt	Syria	Iraq	Iran
FROG - 7	mobile	unguided	500	70	HE Chem. (435)	40	12	18	?	
FROG - 7 modified	mobile	unguided	?	90	Cluster ?				?	
SCUD - B	mobile	inertial	900-1000	300	HE Chem. (985)	80	9	20	?	6+msls
SCUD-B modified AL HUSSEIN	mobile	inertial	1000	650	HE Chem. (500)				?	
SCUD-B modified AL ABBAS	mobile	inertial	1500-3000	900	HE Chem. (350)				?	
SCUD - C (North Korean)	mobile	inertial	?	550	HE (?)				?	
SS - 21	mobile	inertial + radar homing activation	30-300	70	HE Chem. (482)			18		
AL FATAH	mobile	inertial	900-1000	950 (?)	? (500)	under development				
AL AABED (derived from missile launch msl Tammouz)	?	inertial	?	2 000	HE Chem. (750)				under development	
IRAN 130	mobile	inertial	?	130	HE (?)					under development
NAZEAT (355mm.)	mobile	unguided	?	90	HE (150)					under development
SHAHIN (333 mm.)	mobile	unguided	?	20	HE (180)					under development
OGHAB (230 mm.)	mobile	unguided	?	80	HE (70)					under development

Maghreb and the leadership of the Arab world, leveraging on the one side on its own historical values (the Algerians compare their revolution to Russia's and China's communist ones) and, on the other, on an extreme interregional and international activism supported by the economic, demographic and military capacities of the country.

The vicissitudes of the years-long intestine struggle that lacerates the Algerian community bring to light the ghost of the coming to power of an extremely radical regime, assuredly willing to use the WMD at its disposal in order to establish "in the name of Islam" its regional pre-eminence.

Both Algeria and Libya formally justify their WMD programmes with the need to confront the enormous strategic threat represented by the nuclear arsenal of the Jewish State, despite their being very far from the area of the Arab-Israeli conflict.

To this necessity, Libya adds that of having to face the challenge it has been keeping up for years with the West. Actually Libya wants to increase its military capabilities both for contending with Algeria for the hegemonic role in Maghreb and for exerting a remarkable threatening power in its strifes with Tunisia and Egypt.

Pressed between two less than encouraging realities, Tunisia

deems hypocritical its neighbours' assertions, especially after the Camp David Agreements, despite its being the only Maghreb country to have suffered a military attack by the Jewish State (the Israeli air raid which in 1985 destroyed the PLO headquarters of Hamman Lif, near Tunis).

Tunisia fears chiefly the proliferating impulses of Libya, with which it has found itself in conflict situations; the last one in 1980 in the Gafsa incident.

The country fears a Libyan interest for the Tunisian salient in the Mediterranean, in that it would be a perfect launching base for hitting the heart of Europe with ballistic missiles. In order to get

CRUISE MISSILES												
MISSILE		Launcher Installation	Range (km)	Missile Guiding system	Type of warheads (kg)	Number of launching systems						
Denomination	Type					Morocco	Algeria	Libya	Egypt	Syria	Iraq	Iran
MM-38 Exocet	SSM	Ship	42	Inertial with radar activation	HE fragm. (165)	5						
SS - N 2B	SSM	Ship	46	Self-guiding with radar activation IR homing	HE (513)		11					
SS - N -2A Styx	SSM	Ship	46	Self-guiding with radar activation IR homing	HE (513)				8	8	1	
SS - N - 2C Styx	SSM	Ship	83	Self-guiding with radar activation IR homing	HE (513)			17		10		
Otomat MK-1	SSM	Ship	80	Inertial with radar activation	HE Semi-piercing (210)				12			
Otomat MK-2	SSM	Ship	180	Inertial with radar activation	HE Semi-piercing (210)	2		14				
Otomat - Coastal def.	SSM	Coast batteries	6-100	Self-guiding with radar activation homing	HE (227)				3 btrs			
SSC - 3 Styx (1 bn)	SSM	Coast batteries	80-100	Self-guiding with radar activation IR homing	HE (513)					18 (1 bn)		
SSC - 1B Sepal	SSM	Mobile Coast batteries	460	Inertial with radar activation homing	HE (1000)					18 (1 bn)		
SSC -C-2 Silkworm	SSM	Coast batteries	95	Self-guiding with radar activation homing	HE (513)							12
RMG-84 Harpoon	SSM	Ship Submarine	130	Inertial with radar activation	HE (227)				3			?
SS-12M	SSM	Ship	5,5	wire	HE (30)			3				
AM39	ASM	Helicopter	50	Inertial with radar activation	HE fragm. (165)			5	12		?	
Italian Seakiller	SSM	Ship	25	Beam rider	HE (70)							3
C-801	SSM	Coast btr. aircraft	50	Inertial with terminal radar activation	HE Semi-piercing (165)							?
CSS-N-2 (Chinese variant SS-N-2 CStyx)	SSM	Ship	85	Self-guiding with radar activation IR homing	HE (513)				8			
C - 601	ASM	Airplane Helicopter	80	Semi-active radar with radar homing activation	HE (510)						?	
Faw 70	SSM	Coast Batteries	80	Self-guiding with active radar homing	HE Chem. (500)						?	
Faw 150	SSM	Coast Batteries	150	Self-guiding with active radar homing	HE Chem. (500)						?	
Faw 200	SSM	Coast Batteries	200	Self-guiding with active radar homing	HE Chem. (500)						?	
Ababil (derived from Mirach 100 drone)	ASM	Aircraft	500	Inertial with terminal IR homing activation	?						?	

hold of that salient it would need only one attack of WMD on the main centres of the country; the attack would destroy a good part of the Tunisian population, which is heavily concentrated in a few cities.

Tunis, with the chimeric intent of discouraging every proliferating ambition in its vicinity, ignores the so-called right to self-defence of the Arab countries and secretly hopes that the West will come to

its aid in case of possible "brotherly" aggression from Libya's Jamahiriya.

This latter country lives in a state of latent conflict also with Egypt, guilty of being the most pro-West of all Arab countries and, besides Algeria, of also wanting the leadership of the Arab and Muslim world.

The purposes of the Egyptian programmes for the development

of WMD and ballistic missiles exceed the mere ambitions of regional pre-eminence and are summed up in the willingness to keep a balance with Israel as regards military capabilities - the Camp David agreements notwithstanding - and an adequate anti - Libya WMD deterrence, and against similar threats.

Egypt is also much concerned about the increased range of the

missile systems deployed in the Arab enemy countries of the Gulf area, which do not forgive its friendship with the West and the support given in 1991 to the anti-Saddam intervention.

The strategic importance of the Suez Canal for the purposes of the West's projection in the Gulf area and the endogenous turmoils of Islamic fundamentalism make Egypt a centre of tensions difficult to control; assuredly if Cairo and Algiers were to fall in the hands of Islamic regimes all hopes to reach a peaceful settlement in the Mediterranean area would be crushed.

Proceeding towards the East, proliferative aims can be found also in Syria, a country engaged in a strategic confrontation with Israel and constantly involved in the destabilizing plots of Middle-East policy; suffice it to think of its influences on the sovereignty of Beyrouth's government and the assistance given to the Hezbollah groups operating in Southern Lebanon against Israel, as well as the rebels of PKK (Kurdish Workers Party) hostile to Turkey.

Conscious of the risks of this subversive action, Damascus aims at acquiring a WMD deterrent capability, not so much for regionalist ambitions as for preventing possible retaliations from Ankara and Jerusalem.

At the foundation of the Iraqi non-conventional armament programmes its clear regionalist ambitions can be detected, as well as the ditch of hostility that separates it from Iran.

The scene of the long conflict between the two countries was animated by an indiscriminate exchange of missile attacks (war of the cities) which had the purpose of bending the morale of the enemy populations and as a consequence putting an end to the stalemate on the battlefield. The Iraqis succeeded in turning the situation in their favour when, overcoming all "taboos", decided to intervene with



Launching of an ICBM Minuteman I from an underground base.

chemical weapons; the same weapons were employed to decimate the Kurdish rebels active in the north of the country.

After the Gulf War and the ensuing international sanctions, Baghdad's ambitions as concerns WMD seemed relatively subdued.

In Iran a relaunch of the WMD programmes and a generalized improvement of the military instrument of the country, thanks especially to the supply of sophisticated weapons of Soviet and Chinese origin (Kilo-class submarines, "Backfire" bombers, Hegu missile-launching patrol boats, etc.) has been taking place for quite a while. A certain doubt remains about the real ability of the Iranian Armed Forces to upkeep and operate these very

advanced weapon systems. This strengthening suggests that, despite the coming to power of "moderate" Muhammed Kathami, the regime is nevertheless willing to achieve a geostrategic position that could enable Iran to carry out, without rivals, the dual role of charismatic guide of the Islamic revolution and first enemy of the State of Israel.

It is a position that the Ayatullahs will attain only when they are able to project their WMD threat on the Israeli territory and major European cities, from Paris to Moscow.

With the specious motivation of wishing to prevent dangerous situations in the area of the Gulf, Iran and Iraq carry out intimidating actions on certain governments of the Middle-East area, particularly those of Cairo, Amman and Ankara, which can be considered as proper blackmail against Western European countries.

Finally, in the strategic calculations of various proliferator states (Algeria, Libya, Syria, Iraq and Iran) there is the willingness of employing the deterrence of non-conventional weapons, aleatory as it may be, in order to prevent any projection of the West, and of the Americans in particular, towards the South - South East; an intention that they legitimize recalling the arrogance shown by Western countries, even in the post-colonial era, with their direct interventions: the British-French expedition during the Suez crisis in 1956, up to the last air attacks of the US against Iraq, accused of wanting to assassinate President Bush.

Muhammar Gaddafi did not hesitate to declare that if at the time of the US air raid on Tripoli in 1986 he had had an adequate missile deterrent he would have hit New-York instead of Lampedusa.

The strategic role ascribed to the new WMD is also enhanced by the perception - evidenced by the Gulf War experience - that the Americans and the Europeans are

COMBAT AIRCRAFT

TYPE OF AIRCRAFT	MAIN MISSIONS	RANGE naut. mi.	PAY-LOAD kg	ARMAMENT	NUMBER OF AIRCRAFT						
					Morocco	Algeria	Libya	Egypt	Syria	Iraq	Iran
F - 1E	Multirole Spec. GA	230-750	6300	AAM and R550 Magic R530; generl Bombs; Rockets	14						
F - 1C	Interceptor with G.A. visual capability	230-570	6300	AAM and R550 Magic R530; generl Bombs; Rockets	15						
F4D/E Phantom	Multirole with aut. GA capability	429-618	7250	General Bombs; AAM and ASM Rockets				25			60
F - 5E	GA	120-570	3175	Bombs; AAM & ASM, AGMs65B Mav.	16						60
F - 5E/F	Training FGA	120-570	3175	Fire Control Systems	4						20
F - 16A	Multirole with aut. GA capability	oltre 500	5400	General Bombs; AAM ASM Rockets				30+15 tng			
F - 16C	Multirole with aut. GA capability	340-740	5400	General Bombs; AAM ASM Rockets				80+6 tng			
Alpha Jet	Light Attack COIN	340-580	2500	Bombs, Rockets Cannon	23			40			
CM - 170 Magister	Light Attack COIN	340-580	2500	AS11ASMs Rockets	23						
OV - 10	Light Attack COIN	198-265	1633	General Bombs; AAM ASM Rockets	4						
SU - 24 Fencer	GA	174-565	8000	General Bombs; AAM ASM Rockets		10	6		20		30
MIG - 21 MF/bis	Multirole with visual GA capability	200-400	1500	AAM; A-2 250-500 kg assorted rockets		95+3 tng	50	100+ tng	150+50 tng	180	
MIG-23 M/MSd	Interceptor with visual GA capability	485-700	3000	AAMs		20+5 tng					
MIG - 23 BN	GA	378-620	3000	General Bombs; AAM-ASM Rockets		40	40+15 tng		60	130	
MIG - 25	Interceptor	675-933	3000	AAMs		14+3 tng	60+3 tng		30+5 tng	included in the 180	
MIG - 23 MF	Interceptor with visual GA capability	328-620	3000	AAMs Bombs			75		80		
MIG - 27	GA	378-620	4000	General Bombs; AAM & ASM Rockets						included in the 130	
MIG - 29	Interceptor with visual GA capability	250	3000	AMMs; Bombs; Rockets; Other ammo					20	included in the 180	30+5 tng
F-14A (Chinese version of MIG21)	Interceptor with visual GA capability	100-200	1500	AAMs; General Bombs Rockets							25+5 tng
SU - 7	GA	240-370	4250	General Bombs; Rockets; AAMs-ASMs						included in the 130	
SU - 20/22	GA	240-370	4250	General Bombs; Rockets; AAMs-ASMs			45		90		
SU - 25	CAS	240-370	4400	General Bombs; Rockets; AAMs-ASMs						included in the 130	
Mirage 5D/DE DD	GA	350-700	4000	General Bombs; Rockets; AAMs-ASMs			44	54+5 tng			
Mirage 5E2	GA	350-700	4000	General Bombs; Rockets; AAMs-ASMs				16			
Mirage F-1AD	Interceptor with visual GA capability	230-750	6500	General Bombs; Rockets; AAMs-ASMs			14				
Mirage F-IBD/ED	GA	230-750	6500	General Bombs; Rockets; AAMs-ASMs			18				
Mirage F-1EQ5	Multirole with GA capability	230-750	6500	General Bombs; Rockets; AAMs-ASMs						included in the 130	
Mirage 2000	Multirole with aut. GA capability	500-650	6000	General Bombs; Rockets; AAMs-ASMs				16+3 tng			
J - 6	Light Attack	370	1000	Bombs & Rockets				40+16 tng		included in the 130	
J - 7	Multirole with visual GA capability	200-324	1500	General Bombs Rockets AAMs				60		included in the 180	
Tu - 22	Bomber	700-1185	12000	General Bombs Rockets AAMs			6+1 tng			6	
H -6/TU - 16	Bomber	3108	9000	General Bombs Rockets AAMs						included in the 6	

so scared by the prospect of suffering losses that they self-restrain from any possibility of intervention. In fact, an Indian military expert suggested "don't fight against the United States unless you have nuclear weapons at your disposal".

Besides these considerations it seems rather obscure the interest of the ruling regimes of Algeria, Libya and Iran to rush on with their proliferative processes, considering that they would have better possibilities to increase prestige and power dangling the nuclear bugaboo as long as possible (like North Korea does). Impatience, besides entailing remarkable costs and risks, can make them miss politically paying occasions in the competition with other regional actors and in the contests with the West.

STRATEGIC CONSEQUENCES OF PROLIFERATION

The proliferation of WMD capabilities in the South - South Eastern areas of the Mediterranean can unsettle many political-strategic situations, up to now shared by the North Atlantic countries as regards the security of Europe and the Middle East. One should therefore raise a question about the potentiality of these weapons and about the probability and direction of their employment. The range of WMD deployed in the area includes at present conventional, chemical and perhaps also biological and radiological warheads mounted on missile - air - and artillery - vehicles. These devices can constitute a threat to the neighbouring countries and in any case in the South - South area, where regional tensions prevail; up to now the ballistic missile exchanges have occurred in Afghanistan, between Iraq and Iran, in the Gulf War and in the Yemeni conflict.



Test-launching of an "Aster 30" surface-air missile, employed in the "SAMP/T" anti-aircraft/anti-missile system.

The only attack on the West occurred in 1986 with the launching of the Libyan "Scuds" near Lampedusa, unless one considers attacks on the West also the Iraqi missiles rained on Israel and Saudi Arabia during the Gulf conflict. In any case the actual non-conventional (chemical) attacks have always remained in the South - South context.

Consequently, at present, the regional actors of the South are also the subjects more at risk as regards WMD present on their territory, but it could also be delusory to foresee a long deferment of this aspect of the threat.

It could suffice the landing in the area of a ballistic missile system with trans-Mediterranean range (i.e. North-Korea's Nodong) in order to worryingly

extend Europe's exposure to the WMD threat. Neither can it be excluded that, in the absence of adequate missile systems, the non-conventional offensive (chemical, biological and radiological) could reach the cities of Southern Europe through air raids or at the hands of terrorist groups. Reflecting upon the political disorder that afflicts this unstable peripheric area of Europe, it seems quite reasonable to fear that the still theoretical growth of exposure in the South may unexpectedly turn into real vulnerability.

The US military presence in the Mediterranean, though reduced to nominal levels continues, therefore, to have a reason to exist due to its two-way function: support to the stability of the immediate southern periphery of Europe, and force of rapid intervention in the Middle-East area. It is an aeronaval presence which, although extremely vulnerable to the ballistic and cruise missiles deployed along North Africa and the Middle East, can appear provocative to certain regimes which have elected themselves avengers of the "victims" of Western aggressions.

WMD AND SECURITY IN THE MEDITERRANEAN AREAS

The perceptions and the security plans outlined by the Southern NATO Countries - from Lisbon to Ankara - about the new risks of WMD proliferation seem rather discordant - France considers such proliferation a consequence of its nuclear and missile capabilities and therefore foresees a response in very advanced terms; Spain and Italy fear its developments but hesitate to consider the problem of response; Portugal and Greece only now start to feel a little worried, unlike Turkey which, running a greater risk, is trying to find an

immediate solution capable of safeguarding its security.

The European perceptions on WMD vulnerabilities in the Western Mediterranean area draw the attention on Libya and Algeria.

The former is a long-standing proliferator, inclined to employ non-conventional weapons against European targets, coherent with Gaddafi's rhetoric of deterrence and self-defence. Already in the past, Libya threatened to attack Spain, Italy and Greece, guilty of having supplied support bases for the US retaliatory actions inside its borders; a threat that cannot be underestimated, given the Libyan interest in finding nuclear know-how and materials anywhere from the former Soviet republics to China.

Algeria inspires fears for the progress made, thanks to Iraqi technological contributions, in the nuclear military field and for the suspicion of having given shelter to Iraqi plants for experiments on ballistic missiles.

But the dismaying thing is especially the possible confluence of two possibilities; the realization of Algerian WMD and the coming into power of Islamic radicalism in Algier, the destabilizing effects of which would certainly project themselves towards Rabat and Cairo.

The ghost of an Algeria dominated by a radical Islamic regime can have implications on the dynamics of proliferation and on the political, economic and territorial tensions of the Mediterranean area (i.e. between Spain and Morocco for the sovereignty over Ceuta and Melilla and for the Canary Island's separatism).

Given this setting, Spain, France and Italy have already promoted some initiatives intended to increase the ability to acquire operative-strategic information, to improve air defence and realize effective defence systems against ballistic missiles.

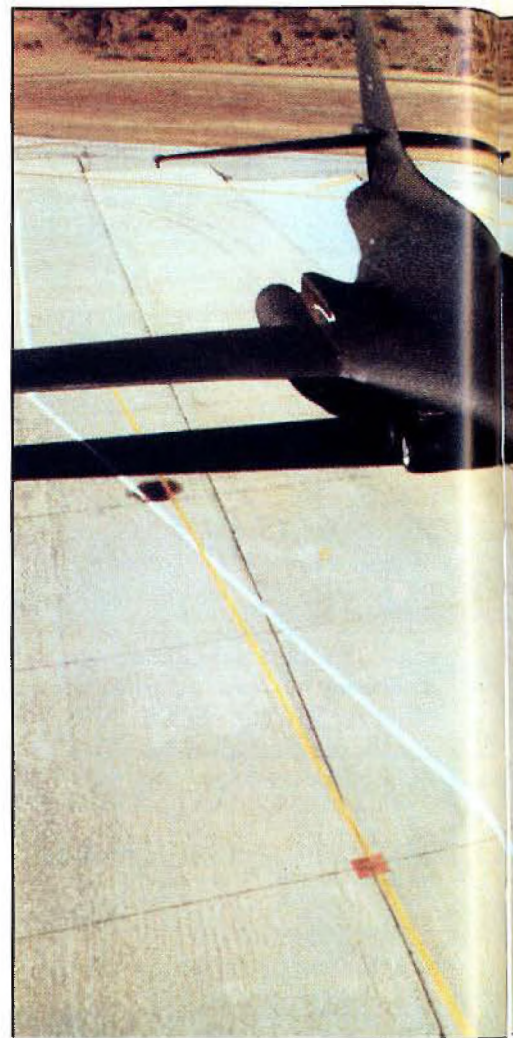
"B-1B" Bomber of the US Air Force.

The integration of Spain within the networks of NATO and European Air defence and the creation of partnerships for the development of the "Helios"(1) satellite survey system and the multirole "Aster 15" and "Aster 30"(2) air defence systems are within this scope.

Following the Gulf War the traditional opposition - especially by France - to the concept of strategic defence against the risks coming from the South is overcome. Considering the political consequences derived from the threat of employing nuclear weapons against targets in North Africa, the French now appear inclined to employ conventional means for prevention and deterrence against such risks. With a view to this, France tends to strengthen its capabilities of tracking and surgical attack against WMD bases and the relevant command and control centres, and boost NATO coordination of systems of air and ballistic missile defence, through bilateral and European cooperation agreements. The countries most interested in such initiatives are Portugal, Spain, Italy, Greece and Turkey, more vulnerable in their territories and regional interests and with less economic resources for their defence needs.

The policy on WMD proliferation outlined in the NATO Conference in Istanbul anyway concerns a wide range of risks, including those deriving from enemies well beyond the southern borders of the Alliance.

The spreading of WMD through the Eastern Mediterranean and its hinterlands has started to negatively affect the regional security after the Gulf War.



The strategic environment at the southern borders of Turkey, already obscured by the Iraqi missile threats, is bound to further deteriorate, if Iran and Syria will persist in their decision to acquire and make operational the new-generation missile systems.

For Ankara such systems are not at all a virtual threat, considering on the one side the tension that empisons its relations with Teheran and Baghdad and on the other the fear of not being able to contrast its new vulnerabilities with the assurances that in the past safeguarded it against the risks of Saddam Hussein's missile attacks.

Turkey in fact presses for a greater interest of NATO towards two directions: deployment of



THE FREEDOM OF ACTION OF THE UNITED STATES AND THE WEST.

The freedom of action of the United States and its Allies of the southern border of Europe could be considerably reduced if the proliferative process did not undergo a pause. The instability of the entire area, with the increasingly dangerous implications of Islamic terrorism, cannot but emphasize the frictions between North and South and negatively influence the prosperity and security of Europe as a whole. The problems of European and Middle East security will become more and more interdependent until they intermingle.

The retaliatory function of WMD, deployed from Maghreb to the Persian Gulf, could cut the prospects of a European participation in a possible new "Desert Shield"-like military operation, and of transatlantic cooperation itself as concerns Middle East contingencies. Some Allies lacking anti-WMD deterrent functions, like Portugal, Spain, Italy and Greece, can appear extremely uncertain in offering bases and air space, even if large collective interests are at stake; uncertainties destined to grow if cities like Madrid or Naples were to be subjected to serious risks.

The cooperation with the United States under WMD threat could also develop through secret ways but this would contrast with the principle of consent and multilateralism.

There is therefore a risk to jeopardize the freedom of action of the United States, whose forces, in order to project into the Mediterranean area, must rely on the freedom of access to the air spaces of Southern Europe.

These are the warning signs of a rather probable situation which will compel the United States and NATO to pay on increasingly high price for the security of Europe.

"Patriot" antimissile systems and realization of an effective policy of counterproliferation.

Both measures would represent for Ankara the essential precondition in order to continue its cooperation for security in other fields. Otherwise Turkey could reconsider its relations with the Alliance and its strategy in the Balkans, and unilaterally acquire adequate defence and deterrence means, even at the cost of heavy economic sacrifices. Some Greek strategists even fear a Turkish nuclear option, if Iran were to extend its missile threat to Central Europe in the name of the Muslim interest in the Balkans.

In broad outline, in view of its new vulnerabilities to WMD attacks, the western policy of counter-proliferation will have to

be approached in such a way as to detect an area of large interest for NATO and the features of cooperation among the Allied states. In the short term, the new vulnerabilities could be assessed by the countries of the southern flank of the Alliance with standards different from those of the countries of Central and Northern Europe, which are still exempt from WMD risks, but, perspectively, also the Europeans, who have hesitated to accept the security implications deriving from the Turkish membership in NATO and WEU, will have to be less averse to assume new defence obligations aimed at neutralizing the risks inherent to WMD proliferation present in the South and East of the Mediterranean area.

If faced by a crisis, the South European countries will request, as a prerequisite for NATO intervention, air-defence and anti-ballistic missile means around their territories, preferably sea-based and capable of moving around the Mediterranean.

This means that a worsening of the European security deriving from the improved performance of the missile vehicles acquired by the countries of the Third World could imply a more effective presence of US Forces projectable beyond the Mediterranean basin, even if destined to operate in conditions of greater vulnerability.

Actually the Mediterranean countries of the Alliance will be tormented by a dramatic dilemma: either try to minimize the risks of WMD, encouraging further reductions of US Forces present in the Mediterranean or to keep, or even increase, their presence, with functions of security and deterrence. In case the second option prevailed, the size of the American force will have to be weighed against the new class of contingency, the type of mission (deterrence, prevention, retaliation) and the contribution that can come from the existing initiatives of national and multinational defence.

The missions will obviously entail threatening challenges for the strategic and tactical

intelligence services, and precision in case of attack on moving and protected targets.

In order to reduce the germs of proliferation, also some non-military options can be paying which are apt to dissolve the perceptions of insecurity and the longing for prestige and geopolitical weight, which notoriously prompt aggressive behaviours.

Practically it will be necessary to try to promote any type of agreement or exchange which can level the road of the North - South dialogue on security. A first step in this direction can be seen in the contacts fostered by the European Community with all the coastal countries of the Mediterranean on economic, cultural and security policy questions, and in those started by NATO in the same direction with Mauritania, Tunisia, Egypt, Israel and Jordan. Unfortunately the proliferator countries (like Libya and Iran) scorn every approach to dialogue.

FINAL REMARKS

From the geo-strategic point of view, the Mediterranean is a place destined to insecurity, being an area of confluence of three differing continental realities. As a matter of fact, in the area, old political, geographical and historical structures coexist which are extremely different and

therefore are the harbinger of ambiguities, duplicities and misunderstandings which certainly do not facilitate the creation of a collective system of security. This inland sea, which at the time of the "cold war" constituted the Southern flank of the Alliance against the former Soviet Union, today paradoxically represents the heart of a future threat difficult to defuse; suffice it to consider the disappointing results of the Barcelona Conference.

Faced by the ruthless challenges of Islamism, Italy, Europe and NATO seem uncapable of reacting appropriately. The European Community is too involved in the EURO problem, OSCE appears to be a virtual organization and NATO is still influenced by Washington's policy.

Meanwhile the countries allergic to dialogue persist in the development of their WMD programmes; Iran already possesses chemical warheads and endeavours to acquire nuclear and biological ones; Iraq is waiting the end of the embargo to relaunch its nuclear military programmes; Libya and Syria have chemical weapons and boost their production (Libya has also biological weapons); Algeria, even if distracted by much more serious problems, has apparently no intention of giving up its nuclear military objectives, from which is not so very far.

But the efforts of these countries are essentially aimed at increasing the respective capabilities of intervention - especially the missile ones - having large recourse to China's and North Korea's "keys in hand" supplies; their know-how is still too poor (except Iraq's) for them to try to develop any delivery system autonomously.



US "Cruise" missile.



"B-52H" of the US Air Force with its various combinations of warloads.

The endemic political turbulences present in the area, worsened by the destabilizing impulses of Islamic radicalism and by the fallout of the tensions left by the Gulf War, encourage in the regional actors the conviction that, thanks to WMD, they can impose themselves as great protagonists in the Arab-Muslim world and on the international stage.

If the risks of WMD seem to concentrate for the moment along the South - South axis - apart from those already impending on the Turkish territory - once the potential of these weapons is increased, the threat will tend to move towards a South - North direction until it touches the capitals of Southern Europe; this could happen within a decade.

This realistic forecast shows that any Western multinational intervention beyond the edge of Southern Europe will become more and more politically and operationally problematic. It will

be a problem to ascertain the objectives that should be attained, the modalities, the weapons to be employed, the training of the forces and, above all, it will be difficult to assess the levels of vulnerability and endurance of the men called to operate in a non-conventional environment.

The countries more vulnerable to WMD will be reluctant to engage forces and allow the access to the bases and airspace which weigh on the vital Mediterranean-Indian Ocean logistic axis, or at the least, they will demand, as a compensation for their cooperation, the Alliance's pledge to accept very onerous political and military costs and warrant adequate deterrence against non-conventional risks.

On the technical level, one must look beyond the mere symbolic defence of populated centres and relay on antimissile mobile defences rapidly deployable in the Mediterranean.

The preconditions for trying to open channels of cooperation with the Arab-Muslim countries must be found through a serious

NATO debate on the policy of counterproliferation based on a greater involvement of the Alliance outside its area and a far-sighted negotiatory activity.

Everything considered, the United States and its key Allies should try to reassess the Alliance's strategy as regards the WMD threats coming from the Middle-East; a strategy that should be considered vital in order to win these new challenges, as the ones coming from the East were won in the Eighties.



** Lt. General (ret.)*

NOTES

(1) "Helios" is an optical reconnaissance satellite designed to deliver a daily supply of pictures of specific sites. According to its orbit's height it can supply pictures at intervals of 12 or 24 hours. In the future the satellite will be fitted also with IR equipment.

(2) "Aster 30" is a very-rapid-intervention all-weather missile, capable of intercepting highly supersonic fighters and missiles within a range of 45km. The system has a surveillance capability of 70km.

THE INDIAN SUBCONTINENT

A giant with clay feet



From Bangladesh to Sri-Lanka, from Pakistan to India: everywhere the advance of fundamentalism, demographic density, ethnic rivalries, class conflicts, unrestrainable migratory flows, abysmal poverty and immoderate riches show the signs of a disconcerting contradiction and of an endemic political and strategic instability made more complex by the probable presence of nuclear weapons.

Nevertheless, in the whole area, equally evident are the upheavals of an incessant process of modernization boosted by the enormous technological and industrial capabilities, which are among the highest in the world.

by Ornella Rota *

India is 75% a rural country, with a level of technology among the highest in the world. Twenty million gods, seven hundred forty languages and at least three hundred thousand university and high-school graduates in scientific subjects a year. More than three hundred million people survive with less than one dollar a day. The film industry is capable of producing eight hundred films a year. Stratified through about forty castes - but in some areas the divisions increase tenfolds - the Indian society on the 11 April 1997 has elected for President Mr K.R.Narayanan, an "untouchable".

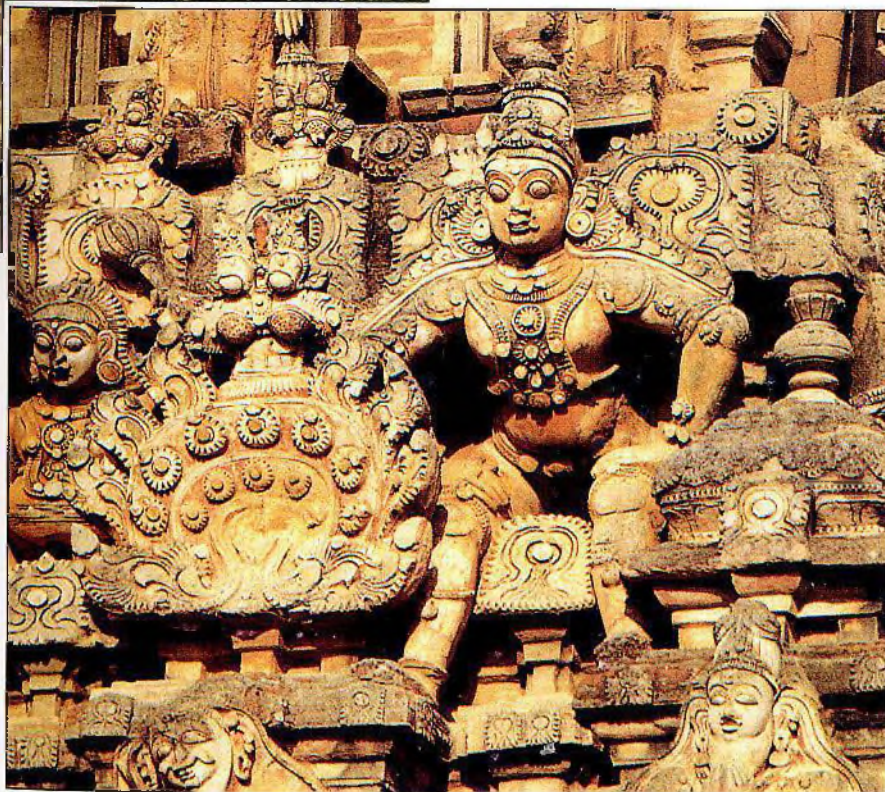
India, a new giant of the 21st century, represents and expands the potentialities, contradictions and jolts of the whole area. The practice of democracy disrupts the ancestral institutional orders. The advance of Islam is a highly unknown factor in societies that have been Hinduist from time immemorial, because polytheism and caste are irreconcilable

according to the Koran: Allah, the only God is the very reason of existence. Equal dignity off all men is an absolute principle.

Like everywhere in the world, fear (of the unknown more than the future) induces "flights" backwards for those entrenched in the past, and forward for those who would like to disown it. Nationalisms, dynasties, ethnic rivalries, corruption, abysmal poverty and abysmal wealth, spy wars, uncontrolled migratory flows, crime and terrorism, wild urbanization, decay. And a demographic explosion due especially to the Muslim minorities of the area, which take pride in refusing the government's programmes of family planning. Despite this, in India, Pakistan, Bangladesh, Sri-Lanka, the civilized society continues to grow. India would suffice to silence those who maintain that democracy and liberalization remain concepts essentially alien to the oriental mentality. In 1996 a survey made in New Delhi by the "Centre for the Study of Developing Societies" showed that 70% of the electorate rejected the idea that the country would be better ruled without political parties and elections. Of the twenty-eight parties in Parliament, half of the members altogether represent the rural zones and less than one third represent the Brahmanic higher classes. The political world and social life freely form alliances unthinkable only a short time ago.

Today the Indian subcontinent has gained a strategic importance unsuspected only a decade ago. The turning-point was precisely the date that changed the world: the fall of the Berlin Wall - without forgetting that some foreboding of the importance of the area had already surfaced during the Afghanistan war.

India, which up to then had been leader of the non-aligned countries, like Egypt and Jugoslavia,



INDIA

Indepent since August 15, 1947, the Indian Union comprises 25 States (each with its own Legislative Assembly and Government) and 7 Territories run by the central Government, it is a member of the Commonwealth.

Area: 3,288,000 sq km

Inhabitants: 913,600,000.

Average yearly demographic growth rate ('90-'94) : 1,8%.

Average life expectancy : 62 years.

Illiteracy:48% (a 1995 figure) .

Actual yearly per capita income: 320 dollars.

Avarage yearly official rate of inflation ('90-'94) : 9,7%.

PAKISTAN

Indipendent since August 18,1947 and a Republic since March 23, 1956, until 1971 it also included the territory of present Bangladesh; it is a member of the Commonwealth.

Area: 796.000 sq km.

Inhabitants: 126,300,000.

Average yearly demographic growth rate ('90-'94) : 2,9%.

Average life expectancy : 60 years.

Illiteracy 62% (a 1995 figure).

Actual yearly per capita income : 430 dollars.

Avarage yearly official rate of inflation ('90-'94) : 9,7%.

very far. A situation that prompts the international bodies to consider the Indian subcontinent a "second degree risk zone" (i.e. regional wars).

Between India and Pakistan there have been officially three wars (in 1947, 1965 and 1971) plus a fourth war, in the eighties, which was stopped at birth by the U.S. because there were concrete suspicions that the two opponents were willing to employ nuclear weapons. There was no denial of the details of a plan, published by the "Washington Post", which envisaged the occupation, by paratroops, of areas of both States. For the time being, the relations between India and Pakistan do not

traditionally based its international policy on an equidistance from the two blocs, and pursued its national interests through the alliance with the Soviet Union. A policy that was not disagreeable to the West, which considered of the utmost reliability a country where - an unprecedented fact in the history of mankind - independence was won through the "non-violence" proclaimed by Gandhi (he was murdered 50 years ago, on the 30th of January).

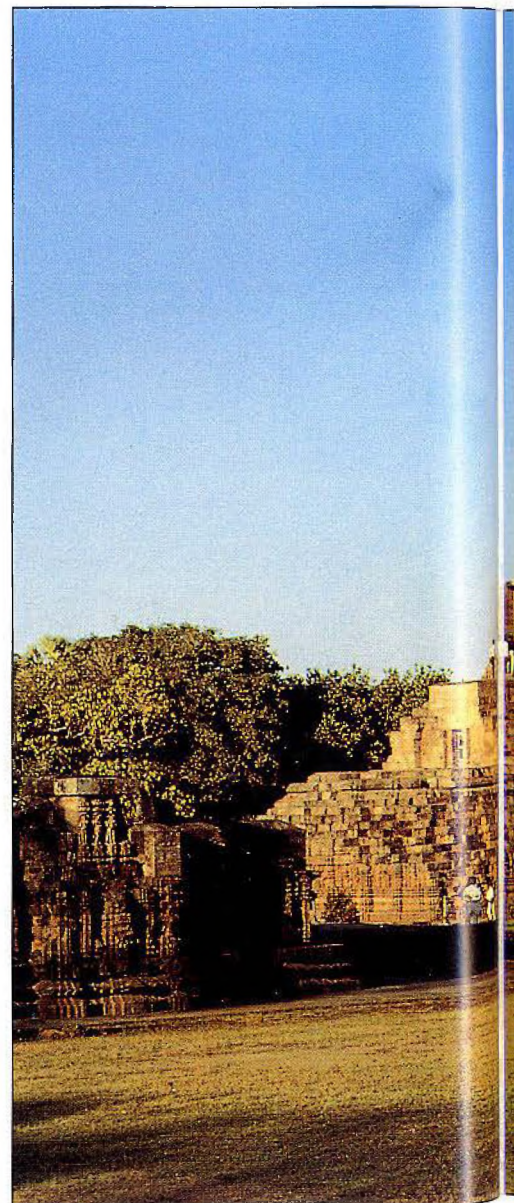
The Soviet occupation of Afghanistan took place a year after the return of Khomeini to Iran, where he announced his will to export the revolution. Obviously its immediate goals would be the Countries of the area, well included in the then Soviet Republics of Central Asia (Tagikistan, Kazakistan, Kirgizistan, Turkmenistan, Uzbekistan). While a good part of the world railed against the Soviet aggression, some experts ventured that, in fact, the Soviet Union acted with the United States' consent in the common interest of restraining the Islamic threat.

From that moment, India

appeared essential. Its borders became strategic in 1989, when - the fall of the Berlin Wall symbolizing that of the Empire - the five Republics obtained their sovereignty, claiming first of all the Moslem "identity" which had been humiliated first by the Czars and then by the Bolsheviks.

What would happen if another war flared up between India and Pakistan? With whom would these Republics seek an alliance? And Iran? And how would the 120 million Indian citizens of Moslem religion behave? Meanwhile from the East (the ill-famed "Golden Triangle") the drug traffic moves more and more to the west; significantly half a million Indian soldiers are engaged in police actions against the traffickers. The Afghan war creates monsters ceaselessly, and groups of terrorists spread inside nations that are not

*The Temple of the Sun in Kamarak;
the ancient black pagoda is the
highest expression of the architectural
school of the State of Orissa.*



seem particularly bad, despite the mutual accusations of supporting the respective internal guerrilla warfare; and the hotly contested Kashmir remains an open wound. In 1996, the many-decade state of guerrilla warfare risked to precipitate: an attack in Kashmir was immediately followed by a bomb in Karachi; practically the same in Lahore, on the frontier. The truce came, also then, after pressing appeals from the United States and other Countries.

In order to offset the quantitative inferiority as compared to India's, Islamabad relies on punctual supplies of the most modern and sophisticated

weapons, often coming from Europe. The Country is suspected of having nuclear weapons made, it is said, to confront the Indian threat. On its turn, according to rumours, India has reacted by also acquiring atomic bombs. Nevertheless, both countries deny having nuclear armaments.

In Sunnite Pakistan, with strong Shiite minorities, the immobility broken by the process of modernization fosters the government's instability, spurs intellectual vivacity and expands the voices of the national communities living abroad. The economic situation is very uncertain, the influence of the

International Monetary Fund further reduces the already limited decision-making margins of governments which are often headed by leaders suspected of corruption. Traditionally pro-western, with excellent relations with the United States, the country has good connections with the international movement of the Muslim Brothers, with important sectors of Saudi Arabia, with some of the Palestinian groups more sensitive to the appeal of Islam. On the connections between Islam and modernity, the ideologists and the Koranic schools suggest theories which are sometimes of great originality, to which the influences



of Sufi (the mystic side of Islam) brotherhoods are added, and also those of Messianic groups.

Founded with the intention of being a Moslem territory, the "Country of the Pure" (that is what the name Pakistan means) suffers from heavy problems as regards public order: separatist feuds and bands of outlaws sometimes paid by large landowners; whole regions (like Baluchistan) are in the hands of armed tribes, entire cities (like Karachi), where only the widespread presence of the Army permits to go about with a minimum of security. Everything in a generalized, inextricable entanglement of plots hatched by sectors directly or indirectly linked with the Secret Service of various countries.

In the Indian subcontinent, today, the wars among self-styled secret agents and their alleged emissaries seem to replace the traditional conflicts, which are not scarce in any case. Sabotage instead of guns, trafficking, blackmail, terrorist attacks. A reality of perfidies which surpasses the phantasy of any novelist or scriptwriter.

The most important Indian and Pakistani intelligence agencies are respectively the Research and Analysis Wing (RAW) and the Inter Service Intelligence (ISI). Started with the support of the C.I.A., in 1962, after a clash with China over an old question regarding borders, the former became known in 1971, at the creation of Bangladesh, which was favoured by India. It gained further weight with Indira Gandhi, especially in the field of "political intelligence". In the eighties, in order to "answer to the terroristic initiatives" in Islamabad, RAW operated in Punjab and also in Sind, a Pakistani southern province. Today its main tasks are to protect oil pipelines (which are destined to take on an absolutely vital importance), to control the utilization of the Indian Ocean's resources (where India has a control station), to ensure adequate commercial information and above

SRI LANKA

Independent since February 4, 1948, Ceylon was proclaimed a Republic on May 22, 1972 with the name of Sri-Lanka; it is a member of the Commonwealth.

Area: 66.000 sq km

Inhabitants: 17,900,000

Average yearly demographic growth rate ('90-'91): 1%

Average life expectancy: 72 years

Illiteracy: 10% (a 1995 figure)

Actual yearly per-capita income: 640 dollars

Average yearly official rate of inflation ('90-'94): 11%

BANGLADESH

Formally independent since March 26, 1971, sovereign State since December 16, Bangladesh was born following a secession from Pakistan, of which it constituted the Eastern Region; it is a member of the Commonwealth.

Area : 144.000 sq km.

Inhabitants : 117,900,000.

Average yearly demographic growth rate ('90-'94) : 1,7%.

Average life expectancy : 57 years .

Illiteracy : 62% (a 1995 figure).

Actual yearly per capita income : 220 dollars.

Average yearly official rate of inflation ('90-'94) 6,6%.

all, to keep a watch on China. The Aviation Research Corps (ARC), - whose communications are sent preferably by satellite and whose pilots, recruited from the ranks of India's Air Force, operate with the support of a base set up, with CIA' help, on the eastern coast of the subcontinent - concentrates their attention particularly on Tibet.

Certainly no less active is ISI, reference point for the Afghan anti-Soviet guerrillas. In 1991, after a journey through India and Pakistan, Robert Gates, former head of the C.I.A., reported that the then Prime Minister Benazir Bhutto had practically admitted her incapability to close down the anti-Indian training centres directed by I.S.I. In order to support Indian separatism the Pakistanis had apparently set up 37 camps; meanwhile it seems that the Indians, plotting against Islamabad had established 27 of them. The Services of both countries face each other in Burma, Nepal, Bhutan (countries that border on

the north-eastern Indian regions, where during the last forty years insurrections have followed one another), in Moslem Bangladesh and in Sri-Lanka, where Buddhists are the greatest majority. Against the Tamil in arms, and after a long sequence of massacres, Colombo asked the intervention of the Indian army, in 1987 and in 1990 (the following year, the Indian Prime Minister Rajiv Gandhi was murdered). Bound together by a loathing for modernity - individually active in the most different ideologies - the Tamil fight for the secession of the northern and eastern provinces and for the full recovery of the values of times past. It is the bloodiest split that the inrush of the modern world has produced in the traditional immobility of the area.

The movement finances itself through various channels: a managerial-like structure which ensures revenues from enterprises spread around the world (i.e. Malaysia, Thailand, Singapore,

Lebanon, Cyprus, Greece), a particular tax system in the areas held by the secessionists, the concrete solidarity of many immigrants abroad and - a practice

that all guerrillas in the world have in common - bank robberies as well as kidnappings (especially in India). Of great importance is the contribution given by the so-called

THE INDIAN MILITARY POWER

Military Expenditure and allotments: 7,43 billion dollars (2.26% of GNP), 58% assigned to the land forces, 23% to the Air Force, 14% to the Navy. The abovesaid appropriations are destined to increase to 18-20% within the coming decade, also as a response to the strengthening of the Pakistani and Chinese Navies.

Army: 880,000 men; 2,400 tanks; 1,100 armoured vehicles; 5,500 guns; 199 helicopters.

Air force: 110,000 men; 844 combat aircraft.

Navy: 55,000 men; 26 ships; 1 aircraft carrier; 18 submarines.

Several hundreds of thousands of men are members of paramilitary forces.

For a long time India got its weapons supplies from the Soviet Union, a "strategic ally"; during the last years Russia has taken its place (especially as regards combat aircraft). The national military industry is also well developed, particularly in the missile field, mainly of the long-range type. Between 1990 and 1994, the military expenses were reduced up to 40%; afterwards there has been a constant increase.

Today, India's military power is the fourth in the world.

"MADE IN INDIA"

"Electronic City", Deccan plateau: via satellites, 75 companies of computer engineering services ensure to multinational companies of the standing of Texas Instruments, Hewlett-Packard, IBM, real-time links with their clients... the new computerized programme of Bristol underground, realized by BA and HAL, has its control keyboard in Bangalore.

In Bangalore also personalized informatic programmes are in progress for megafirms in the whole world (Swissair among them). There are more than 200 research projects in the most different fields (from nuclear to biotechnologies) and the "Indian Institute of Science" has produced 1,500 scientific texts. Eleven thousand engineers of the "Indian Space Research Organization" are engaged in the study and realization of geostationary orbits.

Only slightly above 150 million dollars in 1991, the "made in India" exports of software have totalled 620 million in 1996, and by 1998 they are expected to reach one billion dollars. Of the mentioned amount 58% goes to the United States, 20% to the European countries. The rest goes to Australia, New Zealand, Japan, West and South-East Asia.

The forecasts according to which, by 2010, India will be the fourth economic world power, after China, US and Japan, are based above all on the field of technology.

"naval dust": thousands of small boats, often equipped with a radar and mostly entrusted to fishermen who know where to place mines, a network of shipyards and a good number of mini-submarines for suicide actions. To give oneself death as an extreme act of militancy is a widespread cult among the "Tamil Tigers", the armed hand of the movement, which can count at any time on about forty people (including many girls) ready to die while carrying out terrorist attacks. In Bangladesh, the "split immobility" manifests itself through popular protests, improbable only a short time ago, peaks of radicalism disconcerting in eastern Islam; and spurs lofty debates among the learned men of Dhacca, who try to make some kind of clear distinction between the state and the religious powers. Which is a very difficult enterprise in the all-inclusive perspective of the Koran: but it is a necessity, because democracy advances inesorably.

A country of rivers, Bangladesh, poverty stricken and with a demographic density among the highest in the world. When the rains pour from heaven you must run in order to survive but most of the times, when you return you find neither village nor hut, not even the land. The river has swallowed up everything. There is nothing else to do but to build somewhere else. Then other rains will come. The Chakhman tribes throng in the south-east, in the hill region of Chittagong, ready to fight in order to avoid all possible intrusions in their habitat, joined by peasant communities migrating from areas of the interior, exhausted by the greatest poverty. The frontiers with India are more than four thousand kilometres long and for hundreds of thousands of Bengalis India is a kind of Eldorado.

□

The data reported in the boxes are taken from the "World Development Report" and, unless otherwise stated, refer to 1994.

**Contributor to
"La Stampa" and "Prometeo"*

THE ACTIVITIES IN INTERNATIONAL OPERATIONS

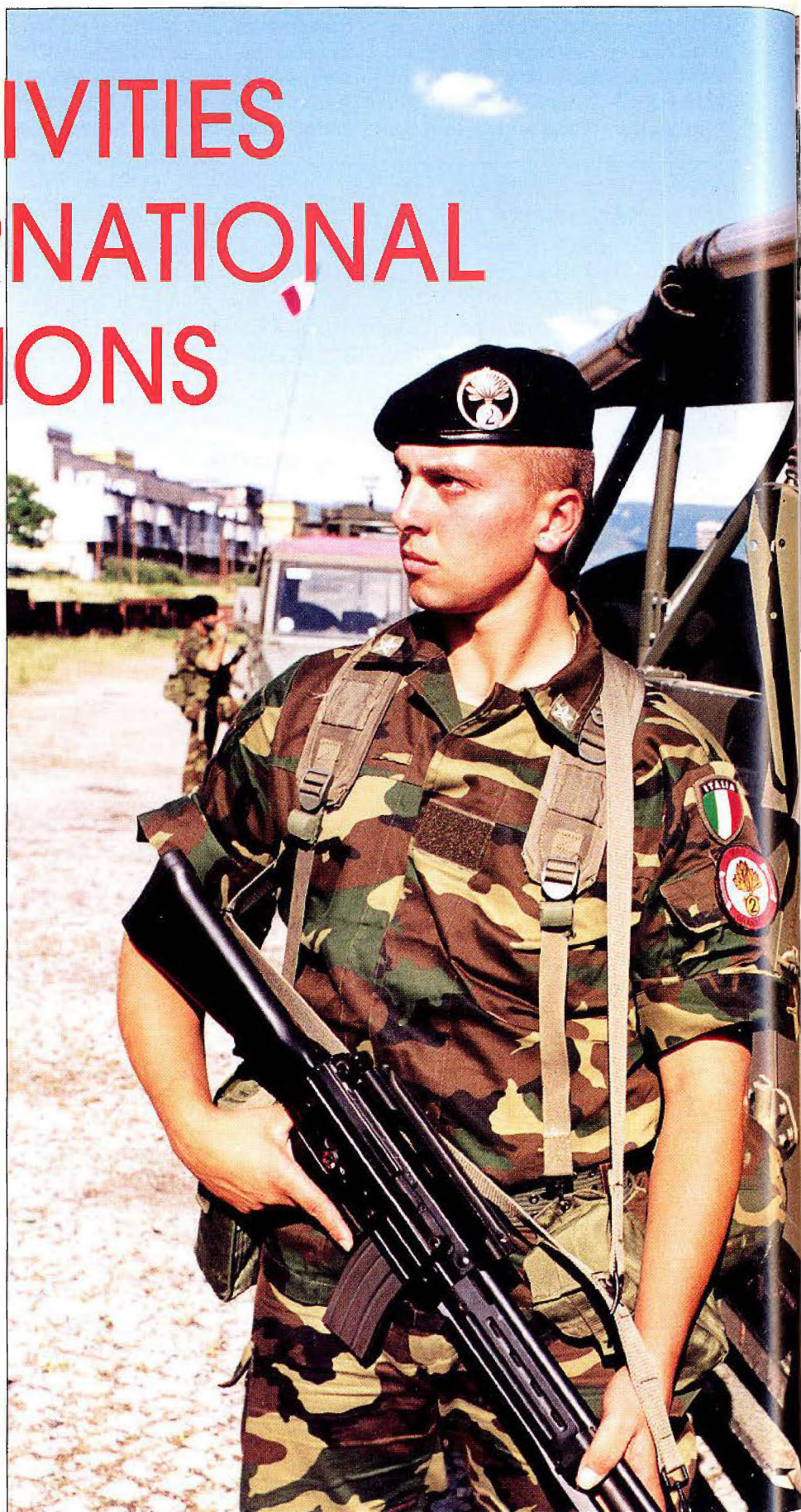
by Giovanni Manione *

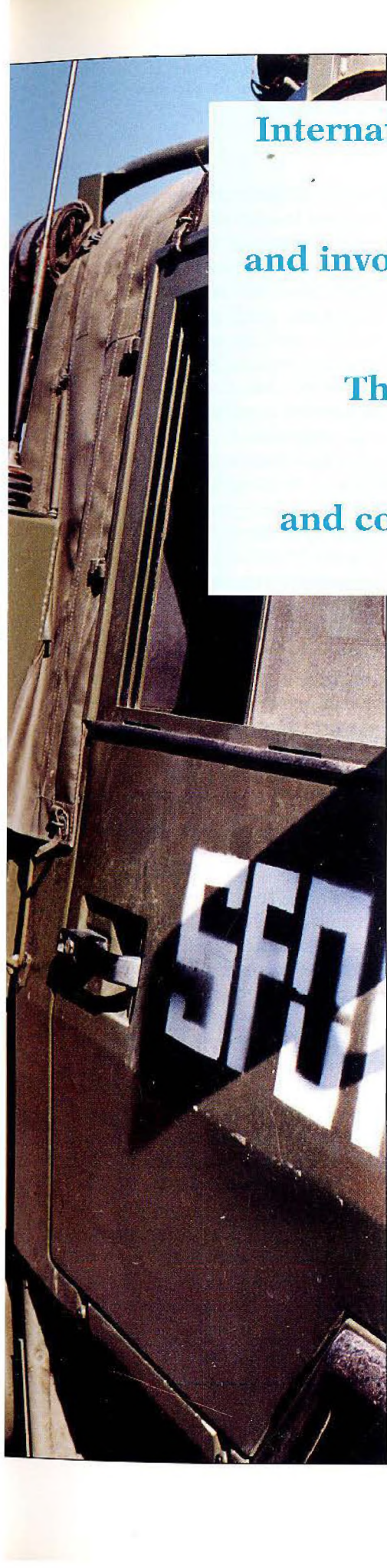
The fast geopolitical evolution which in a few years has completely changed the old and well-established scenarios, involved, among other things, a greater commitment of the West for the maintenance of world stability through the execution of "out of area" operations. At the same time, political and economic requirements made more and more unlikely the execution of these operations by an individual Nation.

The solution that could seemingly reconcile both requirements, adopted in the Bosnian theatre, is the employment of a Combined Joint Task Force (CJTF).

The participation in a CJTF represents the clear political will of a Nation to follow the inspiring principles of the mission, giving the military commitment a prominent role and making it one of the main tasks of the Army.

In principle, in the Headquarters of a CJTF are represented, for obvious political reasons, all - or almost all - the Nations that contribute to the formation of the





International missions are a brand-new variable in the conduct of military operations. It goes beyond the language problem and involves procedures, doctrine and mentality, requiring a considerable effort of professional uplifting. The reflections in this article are the result of the experience gained by the author at the SFOR Headquarters in Sarajevo, and could represent a reliable reference point, specially for the younger Cadres.

contingent. For the same reasons, the assigned jobs tend to cover a wide spectrum, as regards both specializations and ranks. This puts in close contact personnel of different nationalities, making the CJTF Headquarters a really multinational structure. Multinationality appears to be a challenge of the present time, and is a completely new variable which goes well beyond the language problem, involves procedures, doctrine and mentality, and requires a particular training effort aimed at preparing personnel for the new requirements. The reflections arising at the end of an intense and very significant tour of duty at the SFOR Headquarters in Sarajevo could be useful to make known, in particular to the younger Cadres, the peculiarities of a serious task, whose results improve with the betterment of the general and specific preparation of those who have to carry it out. An engagement so fruitful that this experience could possibly become the reference element of the Armed Forces of the near future.

PECULIARITIES AND REQUISITES OF OFFICERS OPERATING IN THE HEADQUARTERS OF A CJTF

Having ascertained the inevitability of national contributions to the establishment of the Headquarters of future CJTFs and their importance, both political and prestigewise, as well as the difficulties that these contributions involve, it is worthwhile to analyze the main peculiarities and requisites that an officer should possess in order to be employed there.

The knowledge of English is of course the basic prerequisite; but this obvious statement deserves a further explanation. The command of the language - written and spoken - is indispensable, but certainly not sufficient: as a matter of fact, as in any working environment, also in the military setting large use is made of technical terms, abbreviations and acronyms that must be known thoroughly, in order to avoid turning the language into a closed-circuit means of communication, with the inexorable exclusion of the neophytes. If one also considers the innumerable



An "AB 205" of the Army Aviation on reconnaissance over the snowy hills near Sarajevo.

accents, the inflections and the dialectal terms used sometimes by "mother-tongue" colleagues, the picture becomes complete and almost tragic.

It is therefore necessary to deepen one's own linguistic knowledge, aiming at the technological field, together - if possible - with the familiarization with the most common terms. It is very desirable that this study be connected to practical exercises, aimed at favouring the comprehension of different accents and cadences.

The second prerequisite is the thorough knowledge of NATO doctrine and procedures.

Here things are even more complex. Although our Country has been present in NATO for several decades, many Italian officers still find it difficult to speak about standard procedures and, above all, about streamlined working procedures, among which the adoption of executive briefings, instead of our long and detailed Staff documents.

At SFOR Hq, for example, the activity which supports the decision-making process, although divided - like everywhere else - into a study phase and a phase in which the

possible solutions are submitted to the decision-making Authorities, radically differs from what is done at national level. The submission of solutions takes place, almost always, in the form of executive briefings, at the end of which, then and there, very often a decision on the subject is made.

The distinctive feature of these briefings, which in fact lead to the definition of a line with the value of a concept of action, is that the briefers are not necessarily the Heads of the branches interested in the process, but rather the officers who have made the study, after having specifically analyzed the problem. In substance, a good knowledge of the matter comes before the rank: it is normal, therefore, for a Lieutenant Colonel, a Major, or even a Captain, to illustrate the solution of a problem to a high-ranking Officer.

It is useless to deny that this methodology of work, mainly based on a matrix-type organizational structure, was rather neglected in the national environment, as was - sometimes - also the NATO doctrine. As a consequence, in the SFOR reality, the Italian officer, who is accustomed to produce

memorandums and notes destined to a long route of verifications, corrections, screenings and then - perhaps - approvals, may find himself illustrating a subject he has studied, verbally and in a foreign language, to a high-level Authority. This practice becomes even more important in case of urgent problems - which, besides, are rather frequent - when the briefing, while giving all the details necessary to clarify doubts and perplexities, must not jeopardize the timeliness of the decision. In practice, the adoption of these methods, really rather far from the "mentality of the memorandum for the staff" implies overcoming a real cultural barrier, which is difficult to cross.

In this sense, things are much easier for the officers from the North European Countries, who are often employed within LANDCENT (Allied Land Forces Central Europe) which normally works with officers from seven nations, many of whom have English as their mother-tongue. In this environment, these procedures are a real and well-established fact, with obvious advantages of mutual acquaintance and mixing. Also in this aspect, the process of real integration will require a certain time, and probably - unless the national working methods change in this direction - will also need the experiences gained in more than one multinational mission. Waiting for this to take place, in order to be able to operate efficiently, we cannot but make recourse to our usual, suggestive and unfailing spirit of adaptation but, at the same time, it is indispensable to make all possible efforts to prepare our personnel for these new working environments. In this regard, it

Roadblock set up by the rangers of the "Col Moschin" Regiment in a Sarajevo street.

would be appropriate to envisage procedural and doctrinal lectures for the personnel destined to the mission; this could be done without particular difficulties, if things are done in good time. To reach a broader result, aimed at a more general preparation in the field of multinationality, one could even consider sending the officers, upon completion of their duty as company commanders, to NATO Commands, to refresh the language and start gaining knowledge of the procedures. The third prerequisite is the "previous experience" in a given field or branch. This particular aspect concerns two sectors: staff officers and Section Chiefs (or higher jobs). As far as the staff officers are concerned, the lower their rank is, the higher their degree of specialization must be. As a consequence, if a person is employed in a branch in which he is not a specialist, he will have to work very hard to achieve the necessary familiarity with the new job. Considering the average six-months duration of an in-theatre tour of duty, this process must be reduced to a minimum, otherwise the result will be a general decline in his global performance.

These are not, therefore, problems related to the preparation of personnel, but it is rather a question of shrewd planning and management of the human resources in relation with capabilities and past experiences. This process must stem from an enlightened farsightedness, without having to resort to a frenzied search for personnel with the more or less right prerequisites; a search that implies the risk that, at the last moment, an officer or a prerequisite may be missing. It should be noted also that, as in any other Command at Corps



level or higher, also in the CJTF Headquarters there is a sharp distinction, as far as the allocation of jobs is concerned, between General Staff Officers and other Officers. The appointment to a job of prestige, from Section Chief upwards, is therefore conditional - as happens often also in the national setting - upon the possession of the War College title and a certain experience in the specific sector, giving a certain guarantee that the officer could perform the tasks connected with the job in a satisfactory manner. In our case, this experience consists of a knowledge of the specific problems of the multinational setting, with special reference to the work in Commands, with all its implications, both from the operational and the personnel policy point of view. In short, the ones that should be able to aspire to jobs of a certain importance - from Section Chief upwards - should be only General Staff Officers, in possession not only of experience in the field of doctrine, procedures and working modes, but also of the direct knowledge of the CJTF Headquarters. These are qualifications that can be obtained only through the

participation in similar missions, even in lesser jobs that could serve as a basis for future employments.

From the of employment standpoint we can therefore see two different types of positions: jobs for staff officers, requiring above all a true experience in the specific field, even if gained only in the national setting, and jobs for General Staff Officers, for whom it is preferable, if not indispensable, to have, besides broad professional knowledge, also a previous experience acquired in a similar Command.

Fourth and last prerequisite, which is proving increasingly important, is a certain capability of operating with informatics-related procedures. Computerization tends to accelerate the decision-making process, by inserting in a net all terminals of the Command and connecting the various Commands with each other. At the SFOR Headquarters, for example, there is a system of electronic mail, currently used, which permits a very fast exchange of data and information, as well as the issue of orders in real time. It is not conceivable, therefore, to operate efficiently in a technologically advanced Command such as this without having the notions

Alpini controlling a road of access to the Bosnian capital.

necessary to move easily among the different application programmes. We must admit that today this problem is less felt, since the new generations of officers are more and more oriented towards the use of computers; it must be underlined, however, that this requisite is not of marginal importance in the selection of the personnel to be employed at the CJTF Headquarters.

PRESENT "REALITY" AND STEPS TO BE TAKEN

The picture outlined so far gives a sufficiently clear description of the figure of the Officer who - already now, and even more in the future - will represent the contribution of the Army in the performance of these missions of high significance and increasing importance. As was mentioned above, the main characteristics are: professional preparation, the knowledge of languages, doctrine, NATO procedures, international environment, informatics.

As far as the first aspect is concerned, the overall qualities of the Italian officer have been amply proved on several occasions; as for the other qualifications, which are the most specialistic component of the problem, it is possible to take significant steps in order to better the situation. What the Army is doing in this direction shows the will to improve in these sectors by confronting with determination a problem which, until a short time ago, was tackled only marginally.

Now, considering the frequency and scope of the national participation in the CJTFs, the need has been acknowledged to develop a number of planning and training activities aimed at



preparing the officers for this particular operational undertaking. In fact, should the Service ignore this aspect of the problem, it would run the risk of being able to employ - on the occasion of future missions - only the "usual restricted circle" of officers, a kind of "caste", increasingly qualified, due to the repeated employments, but without the possibility of turnovers and certainly quantitatively insufficient to meet the ever increasing requirements. The Service's efforts should instead aim at qualifying all its officers for this type of activity, in order to be ready to contribute skilled personnel or even to supply the nucleus of a CJTF Headquarters at very short notice. An important step was the consideration of the knowledge of languages as a fundamental component of an officer's training because, without a concrete capability in this field, there could be the paradox of having "excellent" officers who, lacking the most important prerequisite for employment, could not really be utilized in a multinational setting.

In any case the knowledge of a foreign language is not a static result to be considered as constant; on the contrary, it is the most ephemeral thing we can imagine, and requires a continuous exercise to keep it at the right level. In this perspective, one could envisage mandatory refreshers and verifications, that could be very short, during the long period between the end of the Application School and the end of the General Staff Course. Also, the study of languages during the normal duty activities should be made easier, by facilitating and encouraging the use of teaching aids such as, for instance, multimedia courses which, besides, are already available at many Organizations.

But the road to follow must go well beyond the availability of a high number of officers with a good knowledge of foreign languages; it is essential for them also to know the procedures and working methods which are becoming more and more established within NATO, as well as to be able to use computerized



spontaneously or forcibly - of a bureaucratic-clerical mentality tending to keep things immobile, based on the "things-were-always-done-this-way" principle.

For others, instead, it is just lack of knowledge. As a matter of fact, many are still convinced that to computerize a Command means to provide it with computers, without considering that a computer, if not inserted in a net, is really of very little advantage. At the most, in fact, it allows the operator to write a document without the need of a typist. This is not "computerization", but it is rather like using a quill-pen, more sophisticated than those used three hundred years ago, but with the same philosophy of employment: writing on a piece of paper and taking the result, by hand, to the addressee.

The modern working methods, instead, cannot do without the connection of the computers into a net permitting them to dialogue directly with each other, to transmit documents, on electronic support, to those who must see them and to receive, in the same way, comments and orders. All this without printing a single piece of paper, reducing, at the same time, the delivery times to minutes. This does not mean to forgo years of experience in Staff service, as some others fear; holding the "note" and the "coordination paper" to their heart, as if this were everything. It means, instead, changing instruments as well as hastening the procedures, the scrutiny of the problems and the submission of the relevant solutions.

CONCLUSIONS

The international engagement in keeping geopolitical stability is becoming more and more important, and the military component is its most visible and immediate part. Many contingent factors give rise to a situation in

which the national contribution cannot be expressed anymore simply in terms of political solidarity and symbolic participation, but rather in terms of resources, material and equipment, of which the Officers assigned to the CJTF Headquarters are a fundamental component. So fundamental, that it has immediate repercussions on the image of the Service, since the skills of these officers actively contribute to the success of the mission and, at the same time, to the prestige of the Organization. Having abandoned, at least formally, the "defensive" attitude, mainly aimed at patching up situations of crisis and moving to a more sharply "offensive" attitude, with the purpose of inserting more and more the organization in the environment of multinational cooperation, is a very good start, pointing to the right direction. But the effort of the Army, aimed for the moment at having the availability of a good number of versatile elements, possessing the linguistic and technical skills that guarantee their prompt insertion in any type of operation, can and must go farther. The future of the Organization requires more than this, it requires a more marked approach, in terms of methods, technologies and -above all - mentality, to the "modus operandi" of the Alliance. It requires the effort, on the part of all Cadres, to get ready for the new requirements working, at the same time, for a methodological and technological renewal of our General Staffs. In substance, we must take up a challenge of utmost importance, which must be won by our Armed Forces, which otherwise would run the risk of being progressively excluded and removed from the international military initiatives which, in the near future, will be more and more frequent.

□

** Lieutenant Colonel
Army General Staff*

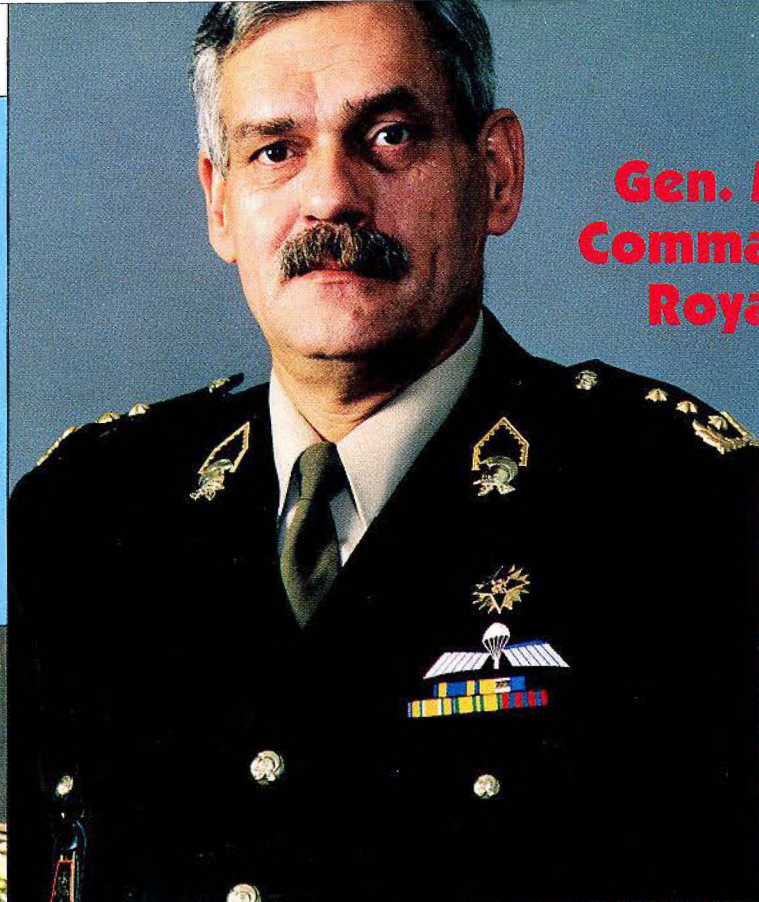
supports. Training personnel to operate in this way requires time, diligence and know-how; furthermore, as was said for languages, the notions learned risk being quickly forgotten, if they are not constantly applied.

If it's true (as it is) that the future of the Army is going to be more and more oriented towards international cooperation, the most complete, effective and durable solution of the problem is that of reducing the differences in methods and technologies existing between our General Staffs and NATO. This would lead to the double result of both modernizing the Headquarters and put the Cadres "in line" with the environment they would find in case of assignment to a CJTF.

This is no doubt the most difficult part of the road towards multinational interoperability, because it implies an openmindedness vis-à-vis more modern organization systems, obviously supported by computerized technology. This naturally requires the abandonment by many - either

**Interview with
Gen. Maarten SCHOUTEN,
Commander in Chief of the
Royal Netherlands Army**

by Enrico Magnani *



HOLLAND

THE NEW ARMY



The Dutch Army is engaged in a difficult programme of reorganization which will continue up to the year 2000.

The aim is to realize a highly flexible instrument, to efficiently contribute to peace operations and to guarantee the defence of the national territory. We discussed these subjects with General Maarten Schouten, Commander in Chief of the Royal Army.

Sir, the Royal Netherlands Army today is confronted with great challenges, such as the reduction of the force and the professionalization. Could you describe the situation and the perspective of the Netherlands land forces for the Italian readers? What kind of problems were to be resolved for this philosophical change?

The basis for the reductions you mention and the transition to an all-volunteer army is laid down in the Defence Priorities Review which the Dutch government published in 1993.

As a result of this review, the Dutch armed Forces, and therefore also the Army, is better equipped for the tasks they face

following the end of the cold war. Reduced in number, but with better mobility and more flexibility, for being able to make a sufficient contribution to peace operations in addition to the defence of the NATO treaty area.

Over the past few years, defence expenditure has decreased: the defence budget for 1998 is in real terms more than a quarter lower than for 1990.

The number of personnel in the Dutch Armed Forces is down by more than forty per cent compared to 1990 and drastic restructuring has taken place. Personnel is a decisive factor in armed forces everywhere. The introduction of new weapon systems, the expansion of tasks to include peace operations,



The 11th Airborne Brigade, whose formations operated in Bosnia-Herzegovina, is one of the leading units of the Netherlands Army.

is a priority. I have tremendous admiration for my personnel as, in spite of all the uncertainty, they worked hard and with great loyalty on the transformation into a new all-volunteer Army. Special programmes and external agencies were used to supervise the departure of superfluous personnel. In July 1997 we were so far advanced with the process that I was able to announce to the personnel that compulsory redundancies were unnecessary. A second important factor was that we never closed our doors due to the restructuring process. Over the last few years we have contributed fully to various NATO or UN missions, and we continued carrying out training and maintained our state of readiness.

During the reorganization process, there turned out to be a surplus of qualified personnel, Officers and NCOs. What kind of solutions are being thought of for a problem with such economic and social impact?

That is a very pertinent question. For each restructuring process, whether you like it or not, the first question is always: what does it mean to me personally? Uncertainty is destructive, especially if it continues for years.

Within the framework of personnel leaving the organization, the project "Taking care of work" was crucial. First of all, I asked people to take a close look at themselves to see whether they wanted to continue being a part of the new Army. The culture in the Armed Forces did not just change thanks to the

restructuring and changes to management have demanded a great deal of the personnel.

The many hundreds of restructuring projects are going according to plan. The entire restructuring process will continue until the year 2000. We are now busy adding the final touches, finetuning the organisation. For example, the Defence Priorities Review contains the standard that personnel can only be on detachment for a maximum of six months in a period of one and a half years. That means that for

each unit which is on detachment, in principle two others must be present. I need to be able to divide the parts of my organisation into three: for each unit which is on detachment, another of the same type is recuperating and one is preparing. This division into three has now been achieved.

If you asked me what the major problems or points for attention have been, I would name two. In the first place the cutbacks in particular meant a great deal of uncertainty for my personnel. Keeping as many jobs as possible

introduction of the professional soldier, the sharp increase in the number of missions abroad also set people thinking. In short, voluntary departure from the organisation was encouraged and did help. That willingness is only created if you offer an alternative. Within the framework of "Taking care of work", an active policy was pursued of finding jobs in industry or business, both individually and collectively. For example, we started a project which enabled transfer to the police or prison service. Other measures, such as early retirement, also helped to avoid compulsory redundancies.

The Italian Armed Forces are preparing for admission of female personnel. Could you describe the experience and difficulties the Royal Netherlands Army has had when introducing female personnel into its ranks? When did the introduction of female personnel start?

I can say that I am completely satisfied with our female personnel. The actual intake of women in all ranks started in 1979. Before that time, a small number of female personnel were to be found in a separate female corps, which mainly handled administrative work. All functions are in principle open to women, including combat functions. The only exception is the Commando Corps.

The only limitations which I sometimes see are physical ones; the Commandos are an example of that. The physical limitations are generally not a problem however, as they are solved in the group situation. A female mechanic will not often replace the wheel of a large crane. The group will itself ensure that she is given other tasks. Of course, adaptation is necessary, such as

separate accommodation in the barracks, but I certainly do not see that as a problem.

In my experience, women are very motivated and have huge stamina. Approximately 9% of my total personnel complement now consists of women. I have nothing against that figure being much higher. In fact, one of the greatest challenges for the Army -

BO-105 Helicopter; Holland has recently acquired attack (AH-64A) and transport (CH-47D) aircraft for its Airborne Brigade.



in view of increasing demand on the labour market - is to obtain sufficient numbers of personnel. Without women I would never fulfill my annual need for approximately 5,000 new personnel.

Transition from conscription to professionalization imposes a philosophical change within the military organization as a whole, starting with recruitment. What kind of measures have been adopted recently to incentivate the enrolment of volunteers?

What kind of prospects are being offered the young regarding integration into the civil labour market after voluntary military service?

The young professional soldier is a highly motivated source of manpower. As far as quality is concerned there is no problem. The quantity required does, however, demand attention. Since 1994 I have been occupied with the transition to an all-volunteer Army. In August 1996 the last conscripts left my organization. To begin with, I could recruit a large number of

personnel from the group of former conscripts. Partly thanks to this effect, in 1996 I had a recruitment result of about 92%. In 1997 that figure is about ten per cent lower.

It is not so much that there is less interest in the Army. It is the number of actual applications that has dropped. The improvement in the economy and more alternatives on the labour market are also factors. The number of school leavers is also falling.

I do not intend to change the entrance requirements radically. I have, however, drawn up a



The defence of mechanized units against the air threat is ensured by the "Caesar" self-propelled gun, Dutch version of the German "Gepard".

whole portfolio of measures. In addition to the financial reward, you have to think of "mini careers", pre-recruitment, reducing the percentage of drop-outs in the training stage and offering recognized diplomas.

We increasingly offer study facilities to the regular personnel with a fixed-term contract. Both the professional diplomas and the experience must offer the young service personnel a good starting position on the labour market.

Another instrument is the "Employer Support" programme, in which together with industry and business we look at what we can offer each other with regard

to personnel. In this way we facilitate the transition to industry or business. Within Employer Support we also learn how we can reach better agreements with industry or business with regard to calling up reservists.

The Army recently decided to increase their component of Special Forces dedicated to direct action and long range reconnaissance patrol. What have been the reasons for this choice?

The operations in former Yugoslavia and elsewhere have proved the value of small, specialist units. My Commando Corps now has one, partially combat-ready, company. The sustainability of the Commando Corps is being improved by the addition of 87 commandos. The

existing corps is being restructured into a unit with three commando companies. They are indeed used for long range reconnaissance patrols. The direct action you mention is limited to military assignments, in front of or behind our own lines. They are not meant for special assignments outside the military field.

Personnel and units of the Royal Netherlands Army have taken part in several peace support operations under several flags. What lessons, i.e. doctrine and policy, have you learned from participation in peace operations?

We have learned a lot. As for Italy and other NATO partners, peace support operations are not new to us. We have been involved with them in various forms

throughout our history, including during the cold war. The Netherlands Army has contributed to all kinds of UN missions for many years, for example UNIFIL in Lebanon. It is obvious that a shift in tasks following the end of the "cold war" has also caused a shift in military thinking.

Many countries have adapted their doctrine as a result of the lessons they have learnt. The doctrine of the Royal Netherlands Army has also changed fundamentally in many respects. In relation to this we have followed the developments in partner countries and NATO very closely. In April 1996 I published a new doctrine.

If you ask me what the most important lessons are, I believe that for all operations you need to have a clear "end state" in view. You must also be very conscious of the risk of escalation. Robust action and the built-in opportunity for escalation dominance are key terms for me.

Will the professionalization of the Royal Netherlands Army change the path of professional and cultural education and training of the

personnel of the force? What will be the main changes and challenges on this fundamental aspect of military life?

The whole system of training changes if you transfer from conscription, in which soldiers are called up for about one year, to a situation in which you can have professionals at your disposal with a contract for a minimum of two and a half years. About 60% of them, by the way, extend their contracts and we keep the regular personnel with a fixed-term contract until a maximum age of thirty.

For me, after restructuring, professionalization of the organization is a priority. I am aiming for that by, among other things, improving the position and the role of the non-commissioned officers.

Professional means that you understand your profession, but it must also be expressed in your attitude and conduct. I am also introducing a code of conduct, which applies to everyone in my organization: from soldier to general, for military and civilian personnel. The code serves as an instrument for making agreements on standards with regard to attitude and conduct.

I see this code of conduct as the

icing on the cake of the growth process towards an all-volunteer Army. It is not a new concept, but not all professional service personnel are by definition "professionals". The eight rules describe the desired conduct; they hold up a mirror to people. The code talks of pride, team spirit, security and exudes what the Americans call a "can do mentality".

A great part of the Royal Netherlands Army is assigned to NATO or is a WEU-answerable force. Does this choice signify a denationalization of your defence?

Yes and no. Politically speaking I believe there is no denationalization. When deploying my units, national political approval always comes first, even for non-Article 5 operations. As long as we are not involved in task specialization within NATO and WEU, national responsibility and decision-making will remain dominant.

Allow me to say, however, that in a purely military sense there has been denationalization since the Second World War. I cannot imagine any operations in the near future outside Dutch territory which will be carried out on a purely national basis. All operations will in that sense always be Joint and Combined. Operationally we are thus in fact denationalized.

The bulk of the heavy forces of the Royal Netherlands Army are part of the NATO main defence forces, as the joint Army Corps with Germany. When was this Corps



The 11th Airborne Brigade was the first unit entirely made up of volunteers.



Holland provided men and equipment to the UNPROFOR contingent in Bosnia, and participated in several other peace-keeping missions.

integrated directing and control authority which goes far beyond the current practice of subordination within NATO.

On 5 October 1997, several documents were signed, amongst others by both Ministers of Defence, that led the way to deeper integration. German Crisis Reaction Forces and Dutch Standing Forces assigned to the Corps, or subordinated to it, can be used for joint participation in multinational crisis management operations. The corps headquarters will be offered to WEU as Forces Answerable to the WEU. Training and logistics are not only national responsibilities but also a collective responsibility, which is a significant and unique form of cooperation between two NATO countries.

The technical part of the command and control structure works well; the mental part too, as was demonstrated during the "Active Sword" Corps exercise in the autumn of 1997. I am very pleased with the progress made in the field of integration. I have complete confidence in the effectiveness of this binational Corps staff.

What are the most important programmes for the future of the Royal Netherlands Army? Are some of them multinational?

Through international cooperation, the Royal Netherlands Army attempts to achieve as high a degree of interoperability as possible with its allies. In view of the close cooperation with Germany in the binational Corps, in many cases

established? Would you like to give us a short historical insight about this interesting experiment?

By the end of 1991, the Dutch and German Ministers of Defence had decided to set up the I German/Netherlands Corps. Three treaties, which contained the arrangements concerning the actual cooperation, were signed to lay the foundations for this corps. The inauguration took place in the presence of Dutch Prime Minister Kok and German Chancellor Kohl

in the Corps' garrison town of Munster, Germany on 30 August 1995. The Dutch Lieutenant-General Ruurd Reitsma became the first Commander. The German Lieutenant General Karsten Oltmanns took over command on 27 November 1997. It is unique for a commanding officer to be in command of foreign soldiers in peacetime.

In European history it is, as far as I know, the first time that two standing Corps staffs have merged into one. The Commander of the Corps has

A "Fuchs" of the EW company; much of the Dutch equipment is similar to that used by the Germans, in order to facilitate the integration of the two Countries' forces in a binational Corps.

an extension of that is sought. Other partners, such as the United Kingdom, France and also Belgium/Luxembourg (in a Benelux context), are also always important with regard to intensive cooperation. Important materiel programmes include the improvement of the Leopard 2, the replacement of the truck stock, the replacement of armoured vehicles such as our YPR-765 and, finally, the replacement of the M109/M114 howitzers.

As far as materiel projects are concerned, I of course follow closely the developments in the field of digitizing the battlefield. The extent to which we should go along with the developments, in particular in the United States, remains a question to be answered. I am following those developments with a great deal of interest.

As far as programmes are concerned, in addition to materiel these will involve future spearheads. I would like to conclude by naming three targets.

First of all, I would like to improve the manning of the personnel complement as quickly as possible to above 90%. Secondly, exercises have unfortunately suffered due to the restructuring. The required attention will be paid to exercises, for peace operations and specifically also for the General Defence tasks. Finally, I have already mentioned this, I am concentrating on creating an Army of professionals. I am proud of the current Royal Netherlands Army and can honestly say that I view the future with great confidence.

□

** Journalist*



Lieutenant General Maarten SCHOUTEN was born in Waddinxveen on 11 December 1943.

He started his military career in September 1961 as a cadet of the Engineer Corps at the Royal Military Academy in Breda. On 1 August 1966, he received his commission as a Second Lieutenant of the Engineers.

As Lieutenant and Captain he held various functions with the 43rd Armoured Engineer Company, the Engineer Training Centre and the 11th Engineer Battalion.

In 1974, he began his Advance Military Studies at the Army Staff College in the Hague. After receiving his advanced Military Studies certificate in 1976, he was assigned to the Army Staff as the Head of the Office for Operational Materiel Matters.

In 1980, Major Schouten was assigned to the Staff of the First Army Corps as Chief Assistant to the Chief of Staff and subsequently as Deputy Head of Section G3. He was then assigned to the Staff of the Commander in Chief of the RNLA as Head of the General Personnel Matters Commander of the 41st Engineer Battalion in the rank of Lieutenant Colonel.

As a Colonel, he served as Head of Section G3 with the Staff of the 1st (NL) Corps from October 1986 to December 1988. From December 1988 to October 1989, he attended a course at the College of Defence Studies in London. From October 1989 to April 1991, he was Commander of the Royal Netherlands Army Communications Command and Deputy Chief of the Army Staff (Command, Control and Communications).

In April 1991, Brigadier General Schouten became Commander of the 12th Armoured Infantry Brigade; in April 1992 he was appointed Commander of the 1st (NL) Corps and simultaneously promoted to the rank of Lieutenant General.

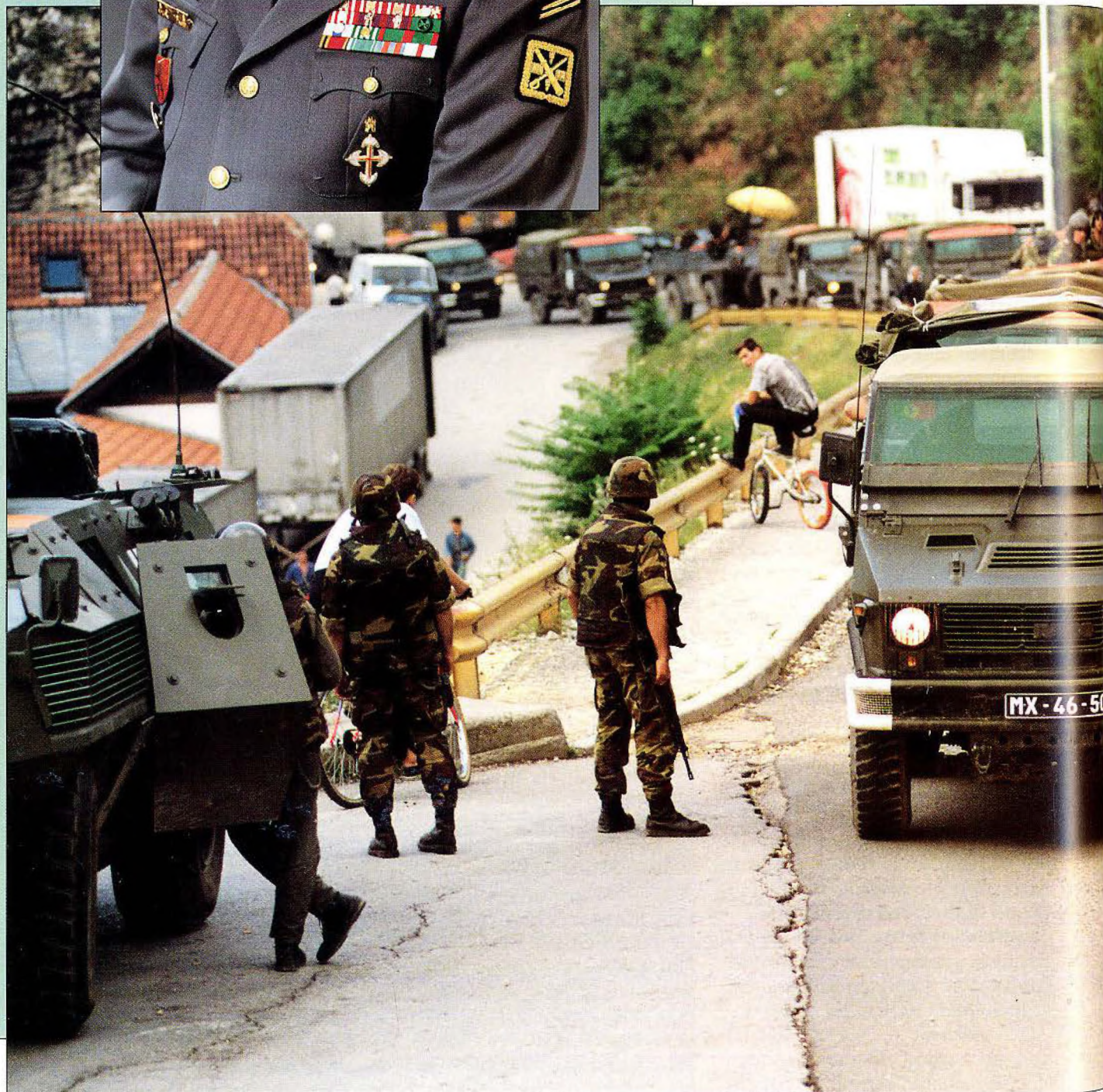
In October 1994, he became Deputy Chief of the Defence Staff at the Central Organization of the Ministry of Defence.

With effect from July 4, 1995, Lieutenant General Schouten was appointed Commander in Chief of the Royal Netherlands Army.

Lieutenant General Schouten is a Knight of the Order of the Lion of the Netherlands and an Officer in the Order of Merit of France. He was awarded the Officers' Long Service Medal for 30 years and the 1966 Royal Wedding Medal. He is married to Mrs. Gerdien van Heck and has two children, a daughter and a son.

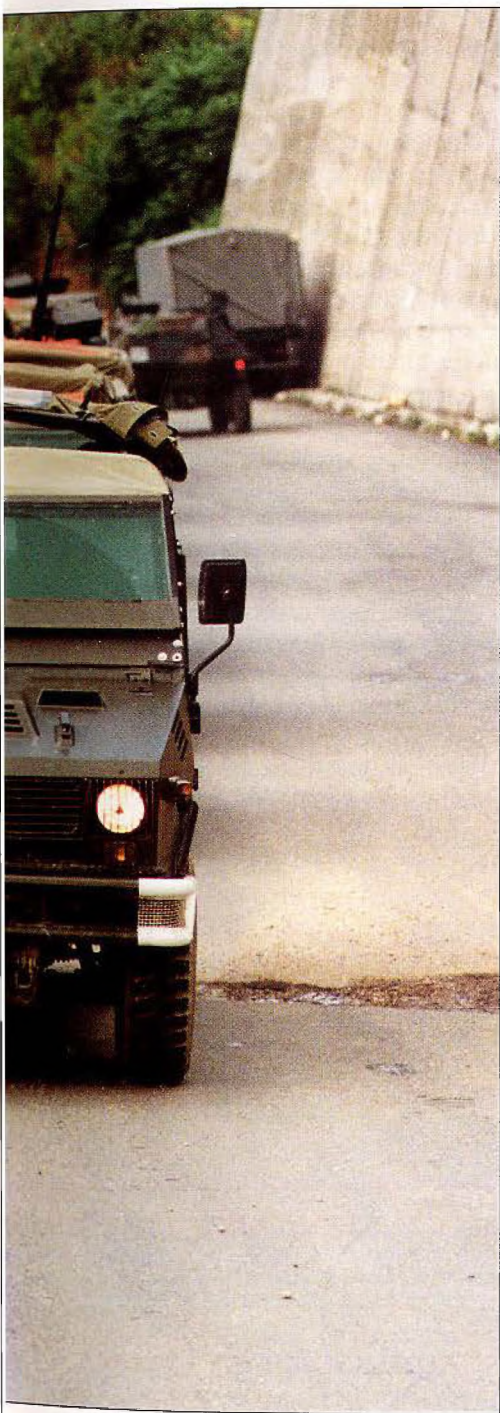
Interview with the Chief of Staff of the Portuguese Army

by Enrico Magnani *



PORTUGAL

THE NEW ARMY



The Exército Portugues has entered the road of a profound renewal which, within the next six years, will transform it into an agile and flexible structure, capable of integrating in international contingents for the development of humanitarian, peace-keeping and peace-enforcing missions. Rivista Militare discussed these and other subjects with General Gabriel Augusto do Espirito Santo, Chief of Staff of the Portuguese Army.

General, Portuguese soldiers are today engaged in many missions abroad, from Bosnia with SFOR to Western Sahara with the UN; they frequently operate side by side with Italian contingents. Could you outline the present organization and future programmes of the Portuguese Army?

The engagement of the Portuguese military - Cadres and troops, men and women - outside the national territory corresponds, for the Army, to an orientation, as for other Armies, towards "choice conflicts" rather than "necessity conflicts". This means that the Army supports the foreign policy of the Nation, as far as it concerns the international organizations which safeguard collective security or promote peace on the Globe. In these missions we are side by side with allied and

friendly military contingents. This shows that dialogue, cooperation and mutual understanding are the new missions of Armed Forces aiming at peace and stability, in areas of the Earth which long for democracy and development in a frame of security.

The Portuguese Army is motivated by these missions, but does not forget that its primary mission is the defence of the Motherland, its integrity and its populations. The Army is going through an important phase of transition, from an Army based on conscription to one founded on volunteer recruitment. To reach the number of effectives necessary for this system (approximately 24,500-Officers, NCOs and Soldiers included) we need a period of transition (6 years) and adequate financial resources. The objective we



Officers of the Portuguese Army engaged in firing-range training.

contingents from more than twenty nations. What are the lessons learned from this long and difficult multinational experience?

The first lesson learned is the easiness, for the military, to cooperate with other soldiers. All Armies foster values of comradeship, discipline, hierarchy as well as rites which constitute the common language of the military status; this makes mutual understanding easier. Also training - for both Cadres and troops - is not very different from army to army. With this starting base, one must make the appropriate adaptations in command, control and support, with very clearly defined rules of engagement.

Of course there are cultural differences among soldiers. Not in the case of Portugal and Italy, since the armies of the two Nations have been cooperating for more than twenty years, and there are very similar traits in the youth of the two countries. This makes cohabitation easy, friendly and good-humoured. Also the relations with the contingents of the other NATO countries are easy, since for many years the Alliance has been developing relations and doctrines known to all Cadres.

But we still have to go a long way, and it is important to continue our cooperation with the countries of Central and Eastern Europe, as well as with those of the southern basin of the Mediterranean.

Professionalism in the Armed Forces is a need felt in all NATO countries. How does the project of requalification of the Cadres fit in the restructuring and

want to achieve is a modern and efficient Army, with motivated men and women, well settled on the national territory, with 2 or 3 Military Regions on the Mainland and 2 Military Zones in the Azores and Madeira.

With a force system based on 3 permanent Brigades (one mechanized, one airborne and a light brigade), the Army will have modern and well equipped combat instruments, as well as support formations also able to perform missions of public interest, if necessary,

in support of the populations in case of emergency or disaster.

The Investment Laws (Military Planning Law), starting in 1998, will enable the Army to acquire efficient means for Command, Control and Information, Combat support (light helicopters), Medical support.

Portuguese troops have been participating in the peace mission in Bosnia since December 1995; many units have rotated, cooperating with

Also the Portuguese Army carries out specific training activities in view of "out-of-area" missions.

operational effort of the Portuguese Army?

The Permanent Cadres of the Portuguese Army are very well qualified, due to the efforts the Army has always made for the training and specialization of these officers along their careers. Their adaptation to the new operational requirements has been an easy job. As a matter of fact, the Army can still avail itself of the training and experience of the African campaign, where the peace mission strongly required contacts with the population and its protection. These Cadres adapt very well to the new concepts in military service, and accept them better than a short and frustrating military service.

The trend in many NATO countries is to arrive at the abolition of conscription. Also in Italy a debate is under way on the convenience of an all-volunteer army. What are the prospects in this sector for the Portuguese Army?

The Portuguese Army hopes, by the year 2003, to increase by

1.000 volunteers each year. The recruitment is made for Platoon Commanders (Officers) and Section Commanders (NCOs); we envisage to reach, for these ranks, the number of 1.500 men.

As far as soldiers and corporals are concerned, the number to reach is approximately 16.000. This means that these regulars will enable us to have a minimum system of forces, guaranteeing the administrative aspects of some institutions with civilian personnel (approx. 5.500).

The transition compels us to establish military duty for about 25.000 youths per year (4

months) with the possibility for some of them (2000) to extend their time up to 7 months. These numbers will progressively decrease as the number of volunteers increases.

In the Italian situation, the recruitment of volunteers involves remarkable problems, connected with the need to guarantee a future occupation to the young who have honorably carried out their two-year or three-year term of service. What are the solutions, adopted or under study, to encourage the enlistment of volunteers?

During the performance of the military service, the Army tries to facilitate the studies of these youths, and/or to provide them with a professional qualification. This takes place in agreement with the state institutions. Furthermore there are incentives, as easy credits for the purchase of a house, a sum of money at the end of the service, as well as favourable conditions for the

An instructor shows the main components of a CETME automatic rifle.





Portuguese and Italian soldiers work side by side in the peace-keeping operation in Bosnia.

admission to the security forces (Police and private Companies) and to the Republican National Guard (comparable to the Italian Carabinieri).

The Portuguese Army already has the experience of the presence of female personnel in its ranks. What are the changes, both operational and logistic, that had to be made in order to introduce women in the various jobs?

In the Portuguese Army we have, at present, about 1.200 women, in the ranks from private

to major. We have now the first women-officers at the Military Accademy. At the present time, women can only serve at combat support or service support units. At the Military Academy, there is a woman-cadet for the Artillery.

We had to adapt structures and Physical Training programmes to the particular requirements of female personnel. For everything else, conditons are the same as for male personnel.

In the course of this year, highly specialized units as paratroops, rangers, mechanized and motorized infantry will complete the phase of incorporation into various Atlantic and European commands such as ARRC, EUROFOR and AMF. What have been the main difficulties of adaptation and

standardization the Portuguese Army had to face?

The Portuguese Army has a long experience with NATO, which started in the '50s - with the 3rd Po Division - was interrupted in the '60s but resumed in the '70s within AFSOUTH, with the 1st BMI attached to a Unit of the Italian Army.

In 1997, a Special Operations Detachment, integrated in the AMF, had to operate in the Arctic Polar Circle. Although climatic conditions were atypical compared to those the Detachment was used to, adaptation took place in a short time. It is abvious that for these situations it is necessary to have a better training in the English language as well as in the employment of the most advanced means of communication.

In the recent international crises we see an increase in the number of so-called "low intensity" conflicts as well as in the operations for the rescue of compatriots residing in the crisis areas, the NEO (Noncombatant Evacuation Operations). International contingents, among which Portuguese units of operation "Forrez" have recently been deployed for some time in Equatorial Africa to protect the evacuation of foreign citizens from Kinshasa and Brazzaville. Have you developed specific models for these type of operations?

Operations in Africa have always been easy for the Portuguese Army. We have been involved in peace operations in Africa (Mozambique, Angola, Western Sahara) since 1994 and recently we participated, with others, in an operation in Equatorial Africa. The Portuguese soldiers fit well in these missions, both from the point of view of the climatic conditions and from that of the contact with the population. The operational procedures we follow for the protection of the population, the evacuation to safe areas and the safeguard of humanitarian convoys are described in our manuals and we train very frequently. We can say, in fact, that we do not have to develop any specific operational procedure.

Portugal participates in EUROFOR, together with Italy, France and Spain. How will this "package of capabilities" find its place in a Euro-atlantic community which opens to the East and wants to dialogue with the southern shore of the Mediterranean?

Portugal is an Atlantic country, but it looks also at the Mediterranean. The Portuguese

Army believes that dialogue and cooperation with some Nations of the Mediterranean basin could be important for European security. In this sense, at present, we are carrying out a technomilitary cooperation programme with MOROCCO and TUNISIA.

Also Portugal has to face general budget restrictions that inevitably have an effect on the resources for defence. How do you reconcile the reduced budgets with the need to maintain a credible instrument of defence and proceed with the modernization programmes?

In the budgets of the Army, the expenditures for personnel reach a significant percentage. The new system of military service implies an increase in costs. Only with investments for specific expenses - as well as with increased budgets - will it be possible to re-equip the Army for the demands of modern combat. This is what we have endeavoured to do with the Law on Military Programming, that in 1998 enters its third cycle of investments which, up to 2003, will exceed 60 billion escudos.

* Journalist

General Gabriel Augusto do Espirito Santo is 62 years old and has been on active service for 43 years. He was promoted to the present rank in 1991.

He attended the Artillery Course at the Army School, the General and Complementary General Staff Courses, as well as the Higher Course for Command and Direction at the Institute for High Military Studies.

He also attended the Command and General Staff Course in Brazil, the 57th Course of the NATO Defence College, as well as the Force Planning and Armament Research courses at the IAGB-OTTOBRUN in Germany.

In the course of his career, Gen. Gabriel Augusto do Espirito Santo served in several Units, Institutions and Organizations of the Army and the Armed Forces.

He has carried out two tours of duty in the former Portuguese colonies overseas, one in Mozambique with the rank of Captain, as Artillery Company Commander, and the other in Angola with the rank of Major, as Staff Officer.

Promoted to General, he was appointed National Permanent Representative to the NATO Military Committee, and served in this capacity from 1991 to 1994. At the Army General Staff, Gen. Gabriel Augusto do Espirito Santo held the position of Commander of Logistics from May 1994 to June 1995.

He has been also Deputy Chief of Staff of the Army from June 23, 1995 to April 16, 1997.

On April 17, 1997 he was appointed Chief of Staff of the Army.

His record sheet shows 20 Citations; he also holds several decorations, among which: 2 Gold Medals for Distinguished Service, Silver Medal for Distinguished Service with Praise, Silver Medal for Distinguished Service, 1st and 2nd Class Medals for Military Merit.

General Gabriel Augusto do Espirito Santo is married to Mrs. Maria Antoinette Marcelo do Espirito Santo and has two sons, Rui Miguel and João Paolo, and one daughter, Isabel Maria.

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The present historical moment sees the Army very much engaged in defining and carrying out a new organizational model which could meet with timeliness the requirements of the future years. It is a challenge against time, because the international situation evolves much faster than in the past when, due to the balance of the "blocs", much more foreseeable evolutionary trends were possible.

Furthermore, the bases of the reorganization are already there in practice, due to some laws which have already been approved or are expected to be enacted soon, as a consequence of the authority given to the Government (regulations on the Highest Ranks, restructuring of the techno-operational and techno-administrative Areas, new rules on the promotion of Officers, Regulations on the recruitment of volunteers, etc.).

The Chief of Staff of the Army has therefore tasked his Staff to tackle this task in a timely and far-reaching manner, defining the conceptual assumptions of the renewal and the consequent structural adjustments, always and in any case with the view of reaching effectiveness levels in line with the tasks as well as with the latest international developments, especially those in the other NATO countries.

This brought to the definition of the "Army Operational Concept" and the new structure of Command and Control, as well as the complete revision of the Operational, Logistical, Schools/Training and Territorial Organizations.

At the same time, the configuration of the "packages of operational capabilities" started to take place. The Service will

have to adopt them; each one of them is to be considered as a mix of operational capabilities, harmonically assembled in order to accomplish a specific mission. This process has brought a first quantification of personnel, weapons, vehicles, material and financial resources to be allotted to the individual "packages", as well as the determination of the priorities to follow in the course of time, in order to update the operational component as a whole.

In short, a remarkable conceptual and organizational effort has been made, with the will of favouring the development of the culture of general planning which must allow the efficient uncoiling of the present phase of transition, giving at the same time to the Highest Ranks, concrete elements of appraisal, which enable them to make the fundamental choices for the near future.

The work we wish to present, significantly titled "Army, Project 2000" was very complex and concerned all sectors of the Service, its Branches and its Corps. Nevertheless, it is only a starting point for the deeper studies which will have necessarily to be conducted, with the collaboration of all those who care for our Institution. It was considered proper, therefore, to publish the basic lines of the Project. To this end, our "Rivista Militare", starting with this number, will publish "in installments" the individual subjects, wishing and hoping that each Reader may be aware of the new concepts and possibly give his contribution of thought.

Lt. Gen. Alberto Ficuciello

Deputy Chief of Staff of the Army

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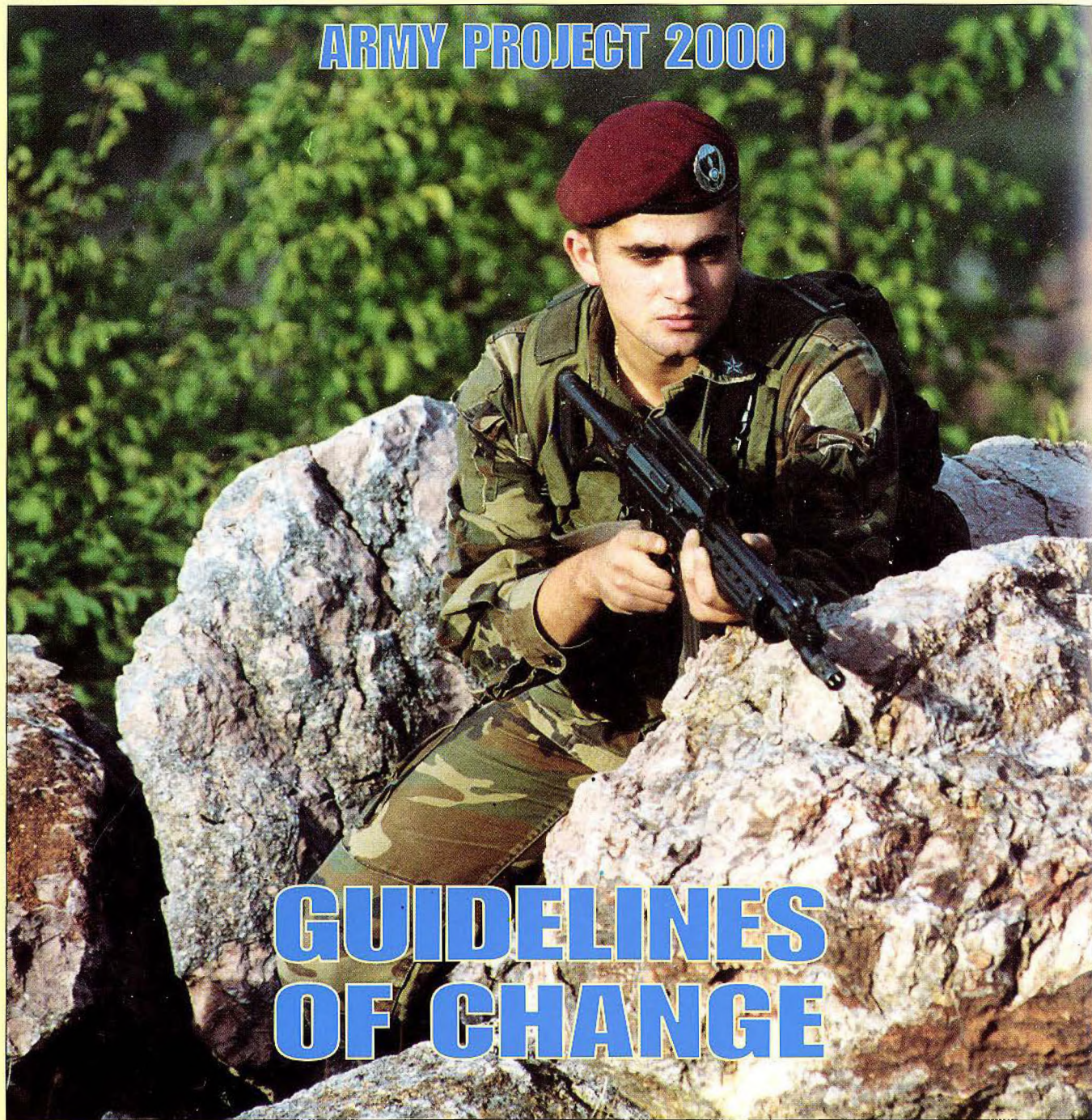
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2000



ARMY PROJECT 2000



by Ivan Felice Resce *

The events deriving from the end of the bipolar contraposition in Europe have in practice upset the system of international relations and required the Atlantic Alliance in the first place, and the member Nations

thereafter, to reproject the security and defence system in its entirety.

Also the Italian Army, therefore, **has entered resolutely the road to change**, based on the picture of the international situation, but without disregarding, of course, the objective reality of which the Service is a part in the national context.

The carrying structure of the change is essentially based upon four pillars:

- simplification of the Command and Control structures;
- subdivision of the operational component into "capability packages";
- reconfiguration of the logistic component;
- review of the training courses for personnel.

But the change cannot be considered concluded once the measures now in progress are completed. On the contrary, it must be a continuous process, related to the changes in the reference picture.

This article is the first of a series aiming precisely at the activation of a constructive debate, within the Service, on the main professional aspects, and has the purpose to give a broad view of the guidelines along which the ongoing changes are moving.

THE COMMAND AND CONTROL STRUCTURE

The fundamental assumption on which the new architecture of Command and Control is based is essentially the following: the Service needs a **simple and flexible structure**, able to redesign itself in order to adapt to the continuously evolving modern scenarios. The need to simplify the structure emerges very evidently if one examines the "hierarchical system" adopted by almost all complex organizations, the military ones in the first place. There is certainly no question of discussing the hierarchical system per se, but only to find the functional and structural adjustments which make it compatible with the characteristics of modern scenarios.

The system was created to permit the performance of Command and Control, whose pivots consist of the triad:

- analysis of the situation;
- preparation of operational plans;
- activation of control procedures.

On this subject, the definition of the hierarchical system of the Roman legions, given by Michael Hammer, appears to be

significant: "the individuals are dispatch bearers. All the **intelligence is concentrated at the top**. A selected group makes all decisions; the others are either **lancers**, i.e. executive personnel, or **middle managers** conveying directives from top to bottom, and information from bottom to top".

The hierarchical system of the Army must be able to meet the requirements of Command and Control referred on the one hand to the conduct of the assigned operations, and on the other to the preparation of the instrument.

The exercise of Command and Control in operations develops through a decisional process, coherently reiterated at the various levels and made compatible with the dynamics of the operational scenarios to which they refer, through an ample recourse to standardization and automation.

The process of preparation of the instrument, albeit characterized by an increased dynamism compared to the past, permits a more rigorous centralization of Command and Control, able to guarantee full coherence of intents and objectives along the entire chain of command.

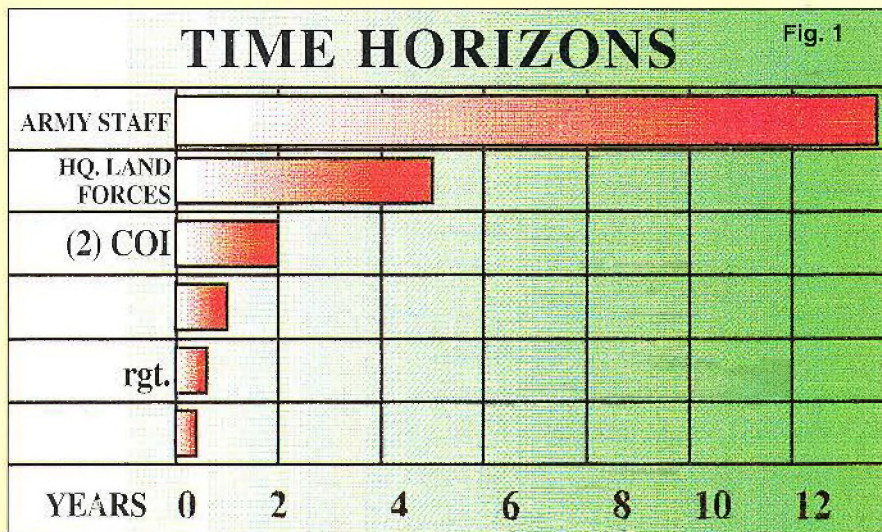
Each level has a **time reference horizon**, which goes from a few days or weeks of the company Commander to the 10-15 years of the top of the Service (fig.1).

In other words, all levels of the hierarchical structure must be able to produce a "**vision of the future**" and **express the objectives clearly**.

Nevertheless, basic conditions for success are not only a clear vision of the future and the exact individuation of objectives at each level but also the coherence among the objectives and the agreement of all those who, in their respective capacities, participate in their achievement.

In a phase of transition such as the one the Service is now going through, from a situation of solid certainties - as, after all, were those guaranteed by the system of the opposite blocs - to that of marked fluidness, it is indispensable to realize a synergy of wills towards the change to be made.

But to realize these assumptions it is necessary to have a simple structure, where the "**persons in charge of the area**" are clearly specified for each component of the military instrument.



This is why the new structure of Command and Control of the Army meets these requirements, since it poses at the top of each area a sole responsible individual, with the authority necessary to perform the functions he is in charge of (fig.2). It is interesting to note that the previous structure envisaged more than 20 interlocutors of the Army Chief of Staff, while in the present organization there are only five (3).

THE OPERATIONAL COMPONENT

To clearly outline the assumptions of the configuration of the operational component of the Army, one must describe, albeit briefly, the international and national reference picture.

The international panorama ensuing from the bipolar confrontation in Europe is much more uncertain than the preceding one. The classic threat, essentially known in all its components and therefore controllable, gave way to numerous risks, difficult to diagnose, which produce wide areas of instability, some of them in the Balkans, North Africa and the Near East.

In this perspective, the concept of "defence", essentially static, evolved into the wider concept of "security", which gives the Armed Forces a more active and dynamic role in support of the foreign policy of the Nations.

As far as Italy is concerned, although the risk of a conflict involving directly the Peninsula cannot be completely ruled out, certainly it has become much less imminent. The Nation, on the other hand, is greatly interested in guaranteeing international stability, indispensable condition for the security and

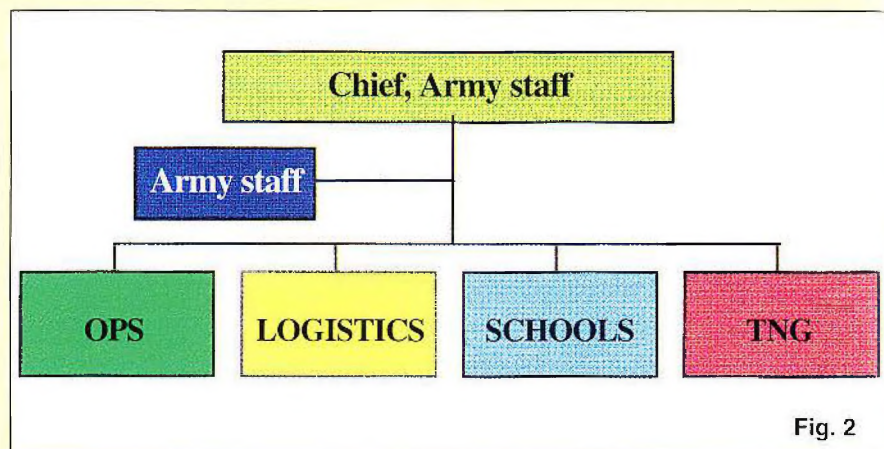


Fig. 2

development of its people.

In this perspective Italy defined the new missions for the Armed Forces, which are, in short:

- **qualified, active and reassuring presence** on the national territory, in order to keep a constant vigil and contribute with continuity to the common security and welfare;
- **projection of forces** in areas of crisis in order to concur, in a multinational contest, in the prevention of conflicts through the improvement of conditions of social and economic disorder (humanitarian operations), or to straighten out existing conflict situations (peacekeeping operations);
- participation in the common defence in the context of the

Atlantic Alliance.

In the modern scenario, therefore, the Army is not just a **producer of forces trained for defence to be set against the threat** in order to make war impossible. It must be, instead, an **instrument capable of expressing operational capabilities** to spend in concrete commitments in support of the security policy.

All this, with the awareness that, to have a role as a participant in the decisions in the international community, one must be able to give a **contribution of capability of command and of forces**, which must be credible for both quantity and quality.

From the techno-military point

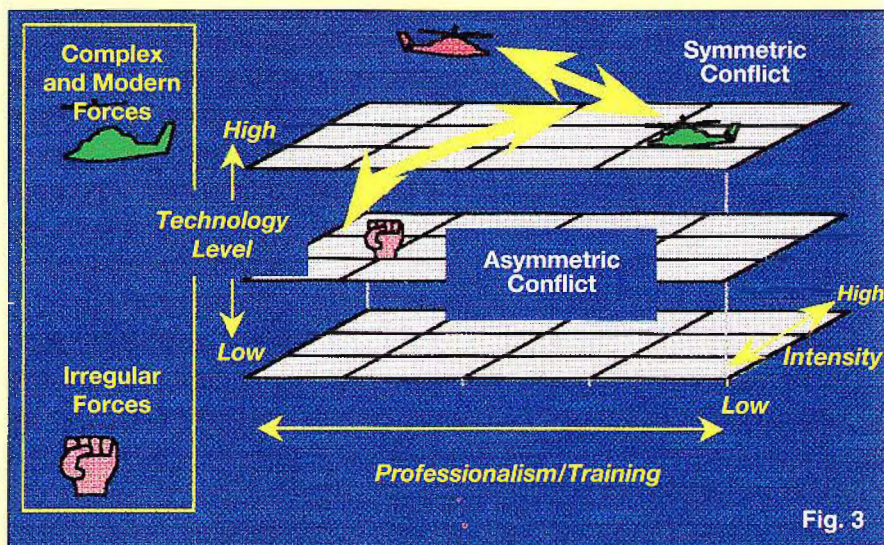


Fig. 3

of view, the possible conflict situation that the Service must be prepared to face will be characterized by three main factors: **technological level**, **professional nature** of the instruments and **intensity** of the operations. Therefore, there will be a spectrum of very diversified conflicts, whose extreme limits fall between **symmetric** and **asymmetric** types of conflicts.

Symmetric conflicts: there will be instruments equipped with advanced technology, as well as a high degree of professionalism. Operations will be very intense, but presumably short.

Asymmetric conflicts: these are practically the ones where we operate today. In at least one of the opposite fronts, there will be improvised technology, lack of rules and possible recourse to terrorism. The intensity of the operations is low, and their duration is generally long. Often, the military action is inspired by activities typical of police forces. From the analysis of the possible conflict situations the fact clearly emerges that **each operation of employment requires specific operational capabilities**.

To quantify and qualify the forces necessary to accomplish the assigned missions it is necessary, therefore, to operate according to two basic principles:

- **modulation of the structure**, which consists in defining the individual "operational capabilities", namely the basic modules designed to accomplish specific operational functions;
- **economy of the formations**, i.e. the definition of "capability packages", namely whole bodies of individual capabilities suited to the missions to be carried out. The **modules**, i.e. the individual "**capabilities**", are dedicated to two macroareas;
- exercise of **Command and Control**, which concerns **Commanders and Staffs**;

Fig. 4

OPERATIONAL FUNCTIONS AND CAPABILITIES TO PERFORM THEM	
FUNCTION	CAPABILITY
Support to Command and Control	Units
Intelligence	Command Function + Resources
Combat	Units
Combat Support	Arty, A/A Arty, Eng., Army Avn. etc
Combat Logistic Support	Logistic units
C2W	Measures
Deception	Measures
Security and Protection	Measures + Resources
NBC	NBC Units
Electronic Warfare	EW Units
Psychological Operations	PSYOPS Units
Host Nation Support	Logistic Commands & Units
Public Information	Equipment
Civil-Military Operations	Equipment+ Units
RSTA	Units + Specialized resources

- development of the **operational functions**, i.e. more or less complex activities, concerning specific units (fig 4).

The individual functions have been analyzed in detail, in order to define, with a high degree of accuracy and reliability, the "capabilities" that must be predisposed to accomplish them.

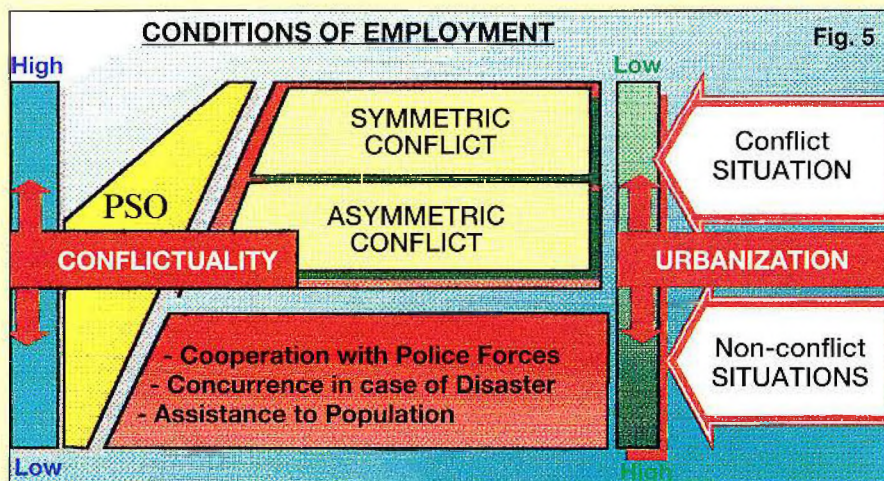
Once the "capabilities" are qualitatively and quantitatively defined, it is possible to determine the mechanisms - to be tested in appropriate exercises - necessary to harmonically assemble them at the moment of employment, according to the

principle of **task organization**.

In fact, it is a matter of preparing task forces including a **structure of Command and Control** adequate to the role to play, as well as **units** suited, in quality and quantity, to the operational functions required by the mission.

But then, how to shape the whole operational instrument, from which the individual capabilities will have to be drawn in order to make up the task forces?

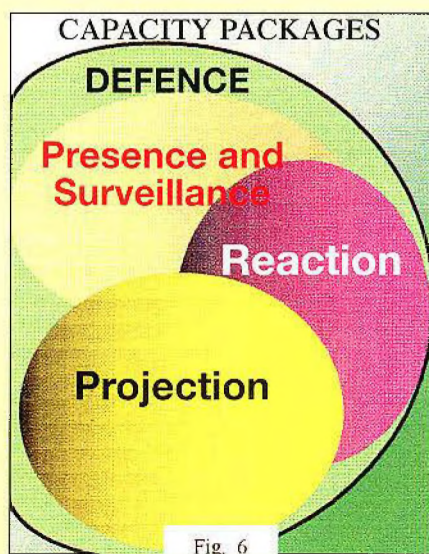
Of course, if we had unlimited resources, the whole instrument should be shaped for the heaviest



task, which is certainly the engagement in symmetric conflicts.

Reality (especially from the financial point of view) compels to make choices, in accordance with the most likely conditions of employment (fig.5).

So, the need arises to **prepare** real "**packages**" of forces, to be destined, as a priority, to one of the assigned missions, each with "**operational capabilities**" suitable for the requirements to be met.



In this perspective the operational forces are classified according to four "**capability packages**" the we shall call - in relation with the priority mission assigned - "**projection**", "**reaction**", "**presence and surveillance**" and "**defence**" (fig. 6).

The "**Projection forces package**" is, primarily, destined to the defence of the external interests and the concurrence to international security and stability. To enable Italy to play a role of participant in the decisions in the international arena, the "package" should have the capability of projecting the Headquarters of a complex large Unit, with relevant support units and at least two Brigades, **ensuring their**

rotation, should the operational cycle last longer than six months.

The "**Reaction forces package**" is destined to concur to common defence within NATO, and includes the forces necessary to fulfill the Nation's commitments within NATO, as far as the Reaction Forces are concerned: the Hq. of a Corps and five Brigades.

The "**Projection and Reaction packages**" are, as a whole, **forces earmarked for employment outside the national territory.** This body of forces is not the total of the two packages, but is rather formed by their least common multiple, considering very unlikely the occurrence of a NATO engagement and an "out-of-area" engagement at the same time.

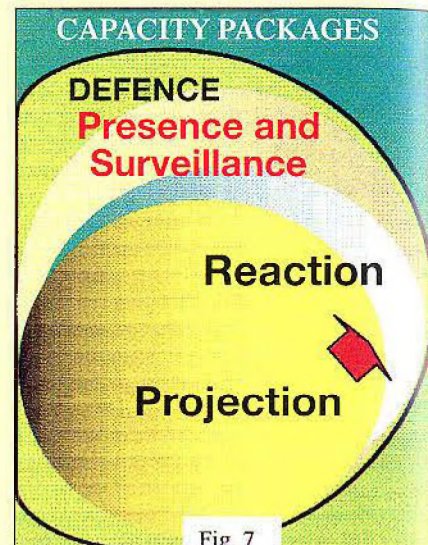
The subdivision of the forces earmarked for out-of-area employment into two packages (projection and reaction) essentially answers the requirement to satisfy the politico-social requests which favour the employment, in out-of- area peace support operations, only of units manned by volunteers.

For the Reaction forces whose employment is envisaged on the base of the North Atlantic Treaty, there are no restraints.

In this first phase of "professionalism" of the instrument is therefore necessary to proceed cautiously and according to very strict priorities in the assignment of the volunteers to the various units.

In the future, with the increase of the volunteer force, the two packages will progressively tend to overlap, and finally will coincide (fig. 7).

The "**Presence and Surveillance**" package includes the forces destined to carry out, as a first priority, the undertakings related to



"territorial control" - as operations "Vespri Siciliani" and "Partenope" - and to the concurrence in case of disaster.

The three "packages" as a whole form the "defence packages" destined to guarantee, within the combined and international context, the security of the Country, also through its direct defence.

The definition of "capability packages" is a fundamental step in the direction of a long term planning, aimed at improving the quality of the instrument and, as a consequence, its effectiveness. The organization by "packages", as a matter of fact, permits to express the "**gravitation**" of resources in a manner coherent with the priorities given each mission, and to adapt the characterizations of the units to the operational capabilities required.

This is a fundamental step, also because each programme of development or acquisition of system will have an associated specific **capability** to be realized, improved or updated. As a consequence, every "cut" in the resources for the Army will involve a precise choice, by the political decision makers, on the "capabilities" to forgo or postpone.



THE LOGISTIC ORGANIZATION

Also the changes in the logistic organization derive, obviously, from the evolution of the assumptions on which it is based.

First of all, the types of operations have increased in number: no more, or not only, classic war operations, but mainly peace support operations.

The reference scenarios, that were once essentially bound to the metropolitan territory, are now mainly "out-of-area".

Finally, the operational contexts

are more and more multinational and, to a certain degree, joint. This means that the instrument must be provided with new capabilities among which - just to mention the most notable aspects - those related to the projectability of components and their integration in multinational logistic formations. In this context, and with reference to the requirements connected with the host Nation support activities even in remote theatres, it is indispensable for the Service to perfect its capability to take on the lead Nation role, which is of

particular value, in the perspective of a qualified participation in the international arenas.

The inspiring principles of the new logistic organization are essentially those of **flexibility** and **simplicity**.

In line with these principles, the logistic functional chain has been further shortened by envisaging only two levels, one for support logistics and the other for adherence logistics.

Support logistics, in particular, has been reorganized with the criterion of centralization. Pivotal elements of the new structure are a highly automated **Command and Control system** and a **logistic instrument** based on a reduced number of **area-responsible formations** and **national specialized poles**, "oriented" to the supply and maintenance of specific weapon systems.

Further, in order to guarantee the continuity of support to the units operating in Italy and abroad, a particular Agency has been predisposed. It is capable to act autonomously, and is dedicated to the management of intermodal transport, both on the national territory and abroad.

As far the adherence logistics is concerned, the reorganization is still under study. A possibility, still to be verified, could be to concentrate the most specialized executive bodies at Intermediate Operational Command level, realizing at the same time a strong decentralization of the executive organs at Regiment level.

SCHOOLS/TRAINING COMPONENT

The Army personnel today must hold very diversified jobs, also in joint and multinational contexts; each one of them requires updated knowledge and skills. In this perspective, the shaping of personnel must

necessarily leave the logic of a thorough preparation in the initial phase of the career, with rare successive updating activities.

Modern training must become **permanent**, following a road made of training moments that, in a temporal succession, precede the fundamental steps of employment.

In substance, it is a matter of realizing a closer integration between "**learning and employment**". For the Service, this concept means to guarantee a continuous osmosis between the school/training structure and the other components.

The definition of the training objectives, for example, does not concern only the "experts". On the contrary, it stems from the open exchange of ideas and experiences between those in charge of the training of personnel and those who employ them.

Likewise, the experience made on the field by the operational and logistic components is poured, still "hot", into schools and training centers through cycles of seminars, directed and conducted by the very ones who have gained that experience.

A further requirement which emerges overwhelmingly in the Service is the **training of the leader**. The "pulverization" of the instruments and the widespread propagation of information, on the one hand multiplied the number of the leaders acting in a modern operational scenario, while, on the other, deeply changed their characterizing elements.

A **widespread leadership** places, at the key positions of an organizations, elements capable of having a "vision" of the future - be it near or far - of defining the objectives,

amalgamating the group and directing its will towards the achievement of the same objectives. In substance, a widespread leadership is an indispensable prerequisite for the creation or consolidation of the culture that places man at the centre of the factors that determine his acting capability (fig.8).

Today all Commanders, down to the lowest levels, must have the qualities of a leader. Suffice it to think of a team leader, responsible for an isolated check-point in a peace-keeping operation. In critical situations that, however, could be the norm, he is the only reference for his men, who place in him all their expectations for the decision on the line of action that will lead them to success.

Consequently, the Commanders at the highest levels become leaders of leaders. They must live and interiorize

the reality of every day, in order not only to formulate a clear vision, but also to transmit it in a simple, effective and catching way. Modern leaders must infuse confidence, develop the qualities of their collaborators and obtain their convinced participation, aware that their subordinates would rather devote their best energies to a cause in which they believe, than drag along an existence without ideals.

In the training of a leader, therefore, precious resources are to be spent, first of all, by the Schools and Training Institutions, but the "attention" of all components of the Army must be synergically conveyed to this objective.

In synthesis, permanent training, employment-oriented instruction and widespread leadership are the objectives in the field of training and instruction. It was, therefore, a

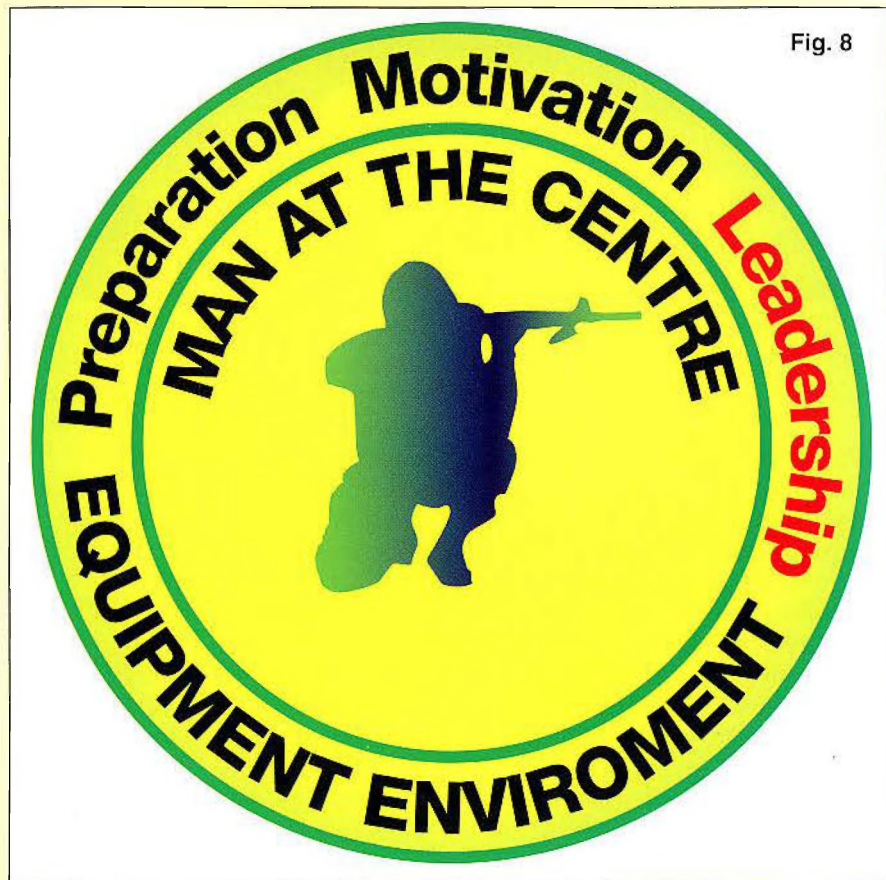


Fig. 8



question of starting to realize what in the civilized world goes under the name of "learning organization", which also points out the need for every "organization", as vital organ of the instrument, to have the capability of "growing" while learning. It is, therefore, a flexible, reactive, adaptable, non-bureaucratic system, whose foundations are: clear guidelines, a general project and a structure with specific characteristics, able to sustain a continuous training, self-training included.

CONCLUSIONS

The organization just outlined, which the Army is progressively adopting, could have to make changes while the work is "in progress". This possibility should not be seen as a negative fact. On the contrary, an efficient organization must be able to reshape itself continuously, with an eye to the "lessons learned" in the various operations conducted in different scenarios, and the other to the future.

This is the objective of planning: to interpret the

experiences gained on the field and, above all, to scan the temporal horizon in order to express the conceptual assumptions of the changes envisaged.

The project of the general architecture of the Army is an indispensable condition for the development of the planning process, since it represents its point of origin. At the same time, the subdivision of the operational component into "capability packages", the streamlining of the logistic support as well as the definition of the new courses of instruction, are as many starting points for the area-responsible persons, who, in close coordination and in harmony with the objectives expressed at the top, can find the most appropriate strategies for keeping the military instrument constantly abreast of the times.

This first approach to the "hottest" themes of the Army is a starting platform that can activate - at least, this is our hope - a constructive and purposeful debate on the emerging directions of Force planning, to enrich the cultural heritage which is the basis of a modern organization.



** Brigadier General
Chief, Planning Office
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NOTES

(1) Michael Hammer, former Professor of Science of Information at the Massachusetts Institute of Technology, is considered to be one of the most important "thinkers" of management of the '90s.

(2) Comando Operativo Intermedio (not to be confused with SMD - Comando Operativo Interforze).

(3) The Territorial Area has been intentionally excluded, since in the short term will be managed with a joint character.



by Domenico Villani *

In modern scenarios the role of the Armed Forces in general and of the Army in particular is that of contributing to the "security" of the Country. From this point of view, the **Army "operational" component is a fundamental one**, in that it actually represents the productive structure of the "security" asset. The other two components - the school-training

and the logistic one - supply in fact the backing in the fields of doctrine, of the indispensable provision and support, **but without the operational component the Army would have no reason to exist**, owing to which it is from the latter that one must start to be able to define the Army in its entirety.

To this end it is in fact necessary to produce a kind of "operation order" where, starting from the missions entrusted to the land instrument within the New

Defence Model (task), the **Service Operational concept** of the Service is defined; that is, the line of action that the Commander of the Service, the Army Chief of Staff, according to the recent law on the High Ranks - intends to follow in order to accomplish his tasks. As a consequence, it will be possible to proceed with the indication of the **composition and organization of the forces** and the assignment of the relevant tasks, defining also the other

aspects necessary to carry out the conceptual intentions.

THE OPERATIONAL CONCEPT

The operational concept of the Army derives from the **missions** that have been assigned to it within the New Defence Model by the changed international scenario and, of course, by the special national necessities.

In particular, in the new international setting, the original concept of "defence" - associated with the threat of a global conflict within the logic of bipolarity and therefore essentially static - has been evolving into the wider one of "**security**". The following step is the employment of the military instruments oriented towards the role of "**active prevention**" of the possible crises, linked with the innumerable risks which threaten the modern world and which are always susceptible of conflict situations.

Within this framework the Army, together with the other Services, must participate in the implementation of a policy of national security, not only limited to the metropolitan territory but extended to the external interests and to international security; it must therefore predispose "ready" forces, which can be deployed outside its borders according to the specific decisions of the Government.

Moreover, in compliance with the law on "principles" n°382/1978, the Service **must contribute to the safeguard of our free institutions and the maintenance of public order as well as the welfare of the national community.**

In the concrete, this entails **three principal missions** for the Service, from which three types of operation or intervention derive which it must be able to carry out (fig.1):

- **presence and surveillance on the national territory;**

- **defence of external interests and contribution to international security.** It implies the ability to carry out **humanitarian and peace-keeping** operations;

- **common defence of national and Alliance spaces,** which requires capabilities of **deterrence**, of **prevention** in the areas of crisis, of **direct defence.**

At this point, having examined the present reality of the land instrument as well as the **law restrictions** existing in terms of general structure, number and type of personnel (officers, NCOs, volunteers and conscripts) and the presumable financial resources available for the future, it may be possible to state the operational concept of the Service. To this end, the "Method" for the solution of operational problems comes to our rescue. A method, according to which, for example, **on the attack** the Commander conceives the manoeuvre in terms of **number and type of efforts, gravitation, times of the manoeuvre, employment of the reserve.**

Why is "attack" the reference? Because the challenge that confronts the Army is decisive for its future, considering that, if lost, the land instrument would not be able to contribute, with the other productive forces of the Country, to keep Italy on the same plane of the other countries which are leaders at international level, exactly at the moment when the Maastricht agreements are becoming a reality. Moreover, we must act with rapidity in order to adapt to the new realities an Army which - although having helped to win the "Cold War" - would be confined, as far as effectiveness is concerned, to an already surpassed past, if it lacked the ability to promptly renew itself.

This requires a "cultural" aggressiveness which is much nearer to the concept of attack than to that of defence, which in any case implies the attitudes of waiting for someone else's initiative.

In short, the operational concept can be stated as follows:

Being understood that the military instrument as a whole will have to

MISSION	OPERATION	Fig. 1
Presence and Surveillance	• Advanced presence (presence on the territory of units with preventive and deterrent purposes and defence capabilities if necessary) • Contribution to the safeguard of the free Institutions and maintenance of public order (i.e. "Vespri Siciliani", "Salento", "Partenope" operations, etc.) • Contribution to the Community's welfare	
Defence of External Interests	• Humanitarian Interventions (conflict prevention by redressing situations of social and economic difficulty) • Peacekeeping operations (settlement of conflict situations already arisen)	
Common Defence	• Deterrence (firm policy, credible instrument, staunch participation in the Alliance) • Prevention (in crisis areas - NATO Reaction Forces) • Direct Defence (in case of threat to the national or other Allies' territory)	

be in a position to contribute to the common defence in case of direct threat, in order to carry out the missions entrusted by the political authority the Army will have to **(number and type of efforts)**:

- **contribute to the defence of international interests, security and stability by preparing projection forces for "out of area" operations**, consisting of projectable **commands**, readily **multinationally** expendable and expandable, and single-function **units** (Regiments) manned by **volunteers**, expressly trained and equipped for peace support operations. In particular, it will be necessary to prepare **projection forces** (fig.2) capable of operating as a unit in the same theatre or in two distinct Theatres and having at their disposal:
 - Division-level HQ which, if necessary, could become the Force HQ in case of medium level multinational operations; it could also become the Sector HQ in an organization of high-level multinational forces; in addition, manoeuvre forces (maximum size **two framework Brigades**); finally, quantitatively and qualitatively adequate tactical and logistic support units;
 - **a second Division-level HQ and two more Brigades and relevant support units** to alternate with the abovesaid Forces in case of extended operations;
- participate in the common security system within the Allied-joint context, equipping Reaction Forces aimed at supplying the planned contribution to NATO's Reaction Forces for the preventive management of crises in NATO contingency areas (counter-concentration). Also for these Forces, as for the projection ones, there is today the need to have, **at least at medium - long term, voluntary personnel**;

PROJECTION FORCES

Fig. 2

- The wide range of activities to be developed and the remarkable diversification of scenarios demand that the units, although grouped in standard formations at their permanent quarters for disciplinary and administrative reasons, be assembled at the moment of the employment on the basis of the specific requirements and according to the principle of task organization.
- Peace support operations are generally of long duration and do not entail armed clashes; therefore the Command and the Unit employed, while not losing their operational capability, wear out in terms of effectiveness. Hence, after a certain period of employment (for ex. after six months) the Commands will have to be rotated, and the same can be said for the units at Regiment level (for ex. after 4 months), in order to have enough time (about 8 months) to recover the efficiency and to update the training.
- The level of participation decided by the political Authorities determines the role that the Nation can play in the international context. Such role can be subordinate, with the employment of a Brigade, or partaker of the decisions, with the engagement of a Division, as it happens in nations like France and Great Britain. A substantial military contribution permits to influence the planning of the intervention, while a marginal participation may entail the agreement to a line of action decided by others, with the relevant consequences for the forces engaged and for the Country itself. Therefore, it is necessary to pursue a participating role in the decisions and consequently provide for the employment of a Division-level Intermediate Command.
- The need exists that for operations outside the national territory only volunteer personnel be employed, unless there is a specific authorization by the Political Leadership.

- ensure a qualified, active and reassuring presence on the national territory in order to constantly contribute to the collective security and welfare by:
 - preparing Forces for territorial defence, equipped and trained for operations related with presence and surveillance but, in case of emergency, able to participate in the fulfillment of "out of area" requirements and to common defence;
 - developing along the entire Peninsula training activities designed for the employment;
 - giving a timely and qualified contribution both in case of disasters and disorders. Such forces can continue to be constituted by conscript personnel, owing to their priority employment inside the country;
 - contributing if the need arises, to common defence with all the available forces and, possibly, with the mobilization ones (Employment of the Reserve).

PRIORITIES IN THE PREPARATION OF THE FORCES (GRAVITATION - TIMES)

The resources available, of course, do not permit to confer all forces the required standard of efficiency except in the medium - long term.

In view of this, the definition of provisioning programmes related to personnel and to the allocation of materials for replacement and/or updating of the equipment must follow precise criteria of **priority**, both between the three force categories and the units belonging to the same category. Premising that **all the forces are necessary for defence** and that to assign a priority to this or that category means only to establish "where to start from" to attain the highest levels of efficiency, the priorities for the categories are:

- priority **one**: Projection Forces;
- priority **two**: Reaction Forces;
- priority **three**: Presence and Surveillance Forces.

Needless to say, such priorities must be "assessed" and if necessary adapted according to the situation. Thus, for example, dealing with "volunteers" there is no doubt that they should be destined first to the projection forces and subsequently to the reaction ones; on the other hand, if it is a matter of preparing interventions for public order, the plans for the presence and surveillance units will have first priority, and so on.

As regards the **times** for achieving the foreseen levels of efficiency, the conditioning factors are numerous, first of all the levels of availability of volunteers and financial resources for the operation and modernization of the instrument. Nevertheless, generally speaking, it could be said that in the **short term** it is necessary to:

- improve the Command and Control structure - already defined during 1997 - **within 1998**;
- make an intermediate Command, two Brigades and relevant support completely projectable within 1998 and make another Intermediate Command and two Brigade Commands "potentially" projectable **within 1999**;
- render two further Brigades completely projectable within the year 2000.

THE OPERATIONAL FUNCTIONS

After defining the operational concept of the Service, one should determine, from the quantitative and qualitative point of view, the **composition and organization of the forces** necessary to accomplish the missions entrusted to them. To this end it is useful to remember the need to express **real operational capabilities**, willingness to play a **participant role in decisions** within the international context, **diversification of the possible**

conflict situations (symmetrical or asymmetrical) (fig.3).

It follows that, in order to **quantify and qualify the forces**, one should operate according to two fundamental principles:

- **modular nature of the structure** which consists in defining the various "operational capabilities", that is, the basic modules capable of performing specific operational functions;
- **cost-effectiveness of the formations**, which translates into defining "**capability packages**" i.e. bodies of individual capabilities suited to the missions to be accomplished.

The **modules**, i.e. the individual "operational capabilities", are destined to:

- exercise of **Command and Control, which is a task for Commanders and Staff**;
- development of operational functions, which is the mission of specific units.

Command and Control Modules

In order to carry out this basic activity, according to the "operational concept", one should foresee **three levels of command** (fig.4):

- Command of the Operational Land Forces (**COMFOTER** - Comando delle Forze Operative Terrestri) which must be able to assume operational responsibilities, that is, to supply

Fig. 3

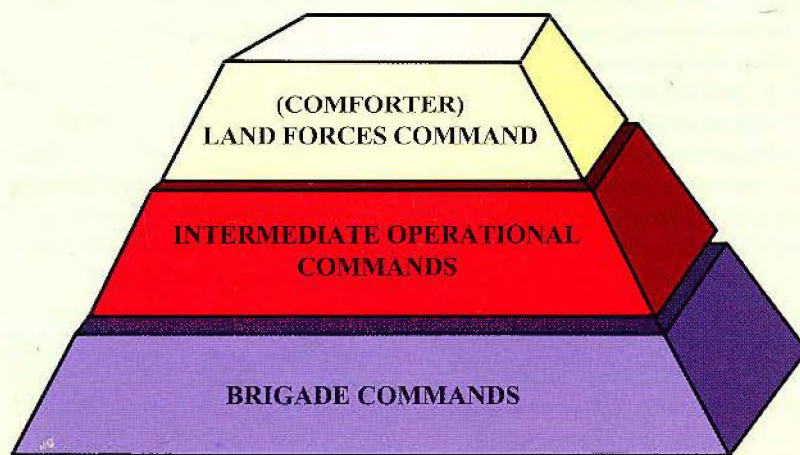
POSSIBLE CONFLICT SITUATION

From the techno-military viewpoint, the possible conflict situations are characterized by three fundamental factors: the technological level, the professionalism of the instruments, the intensity of the operations. Therefore, situations of the following type will emerge:

- **symmetric**, conducted by instruments equipped with systems of advanced technology and extremely high professionalism; the operations will be of high intensity but of short duration;
- **asymmetric**, in which in one of the deployments there are improvised technologies, absence of rules and recourse to terroristic systems: the operations will be of low intensity and long duration; the military action will often be similar to the typical actions of the police forces.

Fig. 4

COMMAND LEVELS



modules or staff elements for the constitution of national or multinational commands on the basis of the CJTF (Combined Joint Task Forces) concept;

- **Intermediate Operational HQ and Brigade HQ**, which must be able to exercise the command and control on units at the immediately inferior level, organic or in reinforcement, national or multinational.

The latter can be called to operate in very differing scenarios, theatres and roles. From this the necessity derives to qualify them on the basis of the priority mission entrusted to them. We shall then have:

Projection Commands for "out of area" interventions; **Reaction Commands** for the management of crises inside the Alliance; **Commands for Presence and Surveillance** on the national territory; **Defence Commands**.

Each type of Command requires its own characteristic that can be referred to three fundamental indicators: "**projectability**", "**interservice expansibility**", "**multinational expansibility**".

"**Projectability**" can be obtained by adopting a "pre-established fragmentation" Staff which, in case of employment, permits to duplicate the cells for the management of the essential activities in the normal location. Moreover there will have to be the availability of a Command unit equipped with means, material and field systems to warrant operation and life outside quarters.

The **expansibility** of the Commands, both in the interservice and international sense, can be obtained by organizational arrangements for the introduction in the staff of air and/or naval cells and liaison teams, the integration of elements/modules of different nationalities, the availability in key positions of personnel with a good knowledge of the main European languages (English,

French, German and Spanish) and the adoption of organizational structures and procedures in common with the other Services and with the Nations with which the forces will probably have to operate.

It is a matter, that is, of adopting solutions which permit to adapt the organization to the weight of the operational requirements deriving from the mandate received.

Modules for the development of operational functions

The operational functions constitute the activities into which the military operations can be subdivided.

Therefore only their analysis permits to define the modules necessary at the various levels for the different situations, a precondition indispensable in order to be able to define the

Fig. 5

OPERATIONAL CAPABILITIES NECESSARY TO ENSURE THE DEVELOPMENT OF THE "OPERATIONAL FUNCTIONS" (CONSTITUTION OF THE TASK FORCE)	
CAPABILITY	FUNCTION
Command and Control Support, Communications, Computer (C4)	Units
Intelligence	Command function + resources
Combat	Units of the main Branch and attack helicopters
Combat Support	Artillery units, Engineers, Army Aviation, Special Forces
Combat Service Support	Logistic Units
C2W	Measures
Deceit	Measures
Security and Protection	Measures + resources
NBC	NBC units
Electronic Warfare	EW units
Psychological Operations	PSYOPS units
Host Nation Support	Logistic units
Public Information	Means
Civil-Military Operations	Means + units (if required)
RSTA	Reconnaissance units, surveillance units, objective acquisition units. Information acquisition units, (HUMINT, SIGINT, IMINT) Special Forces, LRRP

global capabilities that the Service should express. The following table shows a concise examination of the fundamental functions (fig.5).

SUPPORT FUNCTION TO COMMAND AND CONTROL - COMMUNICATIONS - COMPUTER (C4)

The various Commands will have to have a common characteristic, made indispensable by the modern operational environment marked by wide spaces and scarce availability of forces, i.e. the **availability of automated systems** capable of processing data in real time, transmitting orders with great rapidity and adjusting them immediately to the developments of the situation.

As regards the communication field, the **Signal units** must be able to implement a system integrable with the "permanent communication network" and in a position to support a flow of digitized information typical of automated command and control systems, besides possessing the normal prerequisites of security, redundancy, flexibility and resistance to the electronic warfare measures.

In particular, the units destined to the support of Projection/Reaction Commands, with the function of Command of the Force/Command of the national Contingent, should have at their disposal long-distance transmission systems (satellite sets, troposcatter radio links, high-power HF radio stations) integrable with the nets activated in the Theatre. Such capability will be indispensable to the Signal units supporting the two projection Intermediate Operational Commands and only necessary in case of coincidence with the Contingent Command for the communication supports of the projection Brigade Commands.

IEW (INTELLIGENCE- ELECTRONIC WARFARE) FUNCTION

Generally speaking, "military information" is the result of a process of analysis, processing and synthesis of the knowledge of the natural environment and of other components belonging, for any reason, to the operational context (crisis, PSO and conventional warfare) or in conditions of normality. They are necessary in order to outline a situation picture as reliable as possible in order to define the lines of action most suitable to confront, by advance planning, the operational events.

Taking into account the doctrinal sources (national and NATO) as well as the experiences derived from the operations in Bosnia and Albania, the Intelligence agencies should be organized on three levels.

The **first level** based on Elements of Coordination (EC) should be placed within the Staff of the Command and would have the task to supervise the coordination of the whole intelligence activity.

The **second level** should be made up by Elements of Direction, Production and Analysis of Information (EDPAI), coming from IEW (Intelligence and Electronic Warfare) units, organics or in reinforcement, with directive tasks related to research, analysis and information. In operations these elements would form a kind of Intelligence Operational Centre (All Sources Cell) for the direct support of the Command Post of the Unit.

The **third level** would envisage Execution Elements (EE) formed by a group of specialistic bodies capable of carrying out research activities in various fields like, for example, HUMINT (HUMAN INTelligence), SIGINT (SIGNAl INTelligence), IMINT (IMagery INTelligence), wide-range patrolling, etc. It is important to emphasize that these research bodies are represented in part by

specialistic units and in part by operational units, which, working in synergy within the Research Plan, supply the data to be processed. This structure, although varying in size, according to the organizational level and the mission assigned, allows to have always at one's disposal an intermediate technical element (EDPAI) between the elements of execution (EE) and the Command structure (EC) in order to free the latter from the complicated and onerous activities of analysis and intelligence production.

Finally, it should be emphasized how vital it is, in the intelligence field, to comply with the principles of readiness and adherence, in order to promptly fulfill the intelligence requirements (IRS) of the Commander.

RSTA (RECONAISSANCE - SURVEILLANCE AND TARGET ACQUISITION)

The RSTA function is strictly connected to the information branch and, according to the directives issued by the components of the Intelligence Structure, must supply with great rapidity the information necessary to plan/control the operations. This is accomplished through the unitary employment of every resource capable of carrying out the research and gathering of information data. This entails therefore the employment, coordinated in space and time, of **reconnaissance, intelligence** (HUMINT, SIGINT, IMINT), **surveillance, target acquisition, electronic warfare** units. Such components, on the basis of the maximum hypotheses of employment **assigned** to the Service, will have to be **"assembled"** for the average IEW support requirements of two Theatres.

Also non-IEW units, i.e. Cavalry Regiments and Special Forces, contribute to the RSTA function.

The **Cavalry Regiments**, suitable for carrying out tasks connected with security and reconnaissance in PSO and/or classic operations, must have the possibility to act according to two methodologies: the first, following the "RECCE by STEALTH" procedures, with extremely light units, equipped with very advanced equipment for night reconnaissance and communications; the second, instead, following the typical procedures of "RECCE by FIRE" with heavy units able to engage the enemy with fire actions.

The **Special Forces**, finally, besides fulfilling the combat function, will have to conduct primarily very bold intelligence activities. In fig.6 a schematic depiction points out the methods of employment of the Systems for Research and Gathering of Information in a modern scenario. It should be kept in mind, also for the control operations of the territory, the need to give to the RSTA function a certainly bi-dimensional (land-air) and possibly tri-dimensional (land-air-sea) connotation.

COMBAT FUNCTION

It is the master function of every operation. It envisages different activities related to the operational environment and requires therefore **single-function modules** at **Regiment level** with operational capabilities that can be differentiated in conformity with the following fundamental indicators: **projectability, on-road and all-terrain mobility, fire protection and firepower.**

"Projectability" is an essential characteristic for the modern units and can be ensured only by freeing the Regiment from managerial tasks, which should be entrusted to units at the permanent headquarters, adequately adapted in conformity with the said requirements.

SYSTEMS FOR SEARCHING AND GATHERING INFORMATION

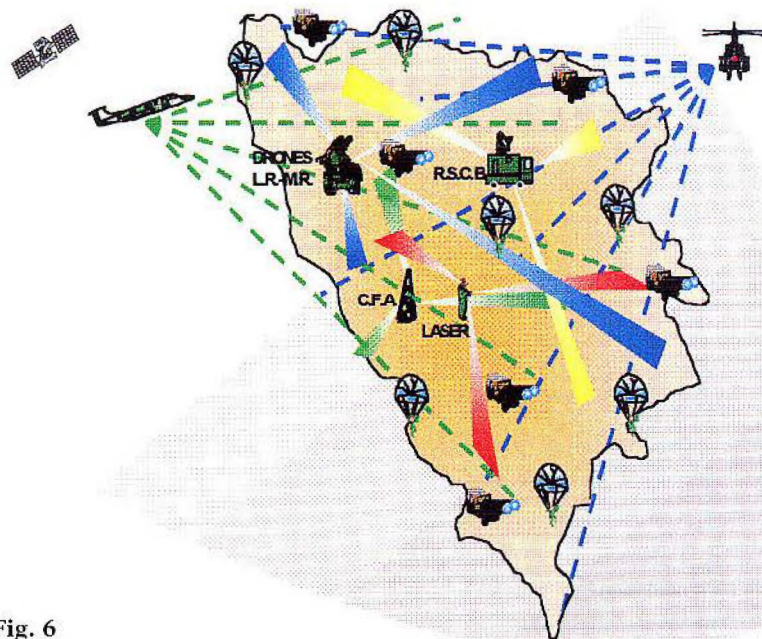


Fig. 6

As regards "**mobility**", it must be pointed out how, in peace-support operations, the ability to drive on most terrains (typical of tracked vehicles) becomes less paying in comparison to the ability to move at high speed on the most probable routes (typical of armoured vehicles).

The forces - which can be defined as **manoeuvre forces** - destined to perform this function include **Infantry Regiments** but also **Cavalry Regiments**, which can be classified within three types of units:

- **light**, equipped with wheeled vehicles with partial protection limited to the fire of individual weapons;
- **mechanized** on APCs, tracked or wheeled, protected, and with on-board armament, also anti-tank;
- **armoured**, equipped with vehicles with high protection and firepower.

The employment of light, mechanized or armoured forces depends on the characteristics of the operational environment and on the tactical operations that must be developed, while the units equipped with wheeled or tracked

vehicles are employed according to the type of practicability marking the physical environment.

Moreover, in the ambit of this function, we should mention the **Attack-Helicopter Regiments** of the **Army Aviation (AVES)**. These, thanks to their versatility of employment, fire power, mobility also on terrain "impossible" for land forces, are an instrument of exceptional power in the hands of the Commander.

As a matter of fact, the modern peace-support operations envisage the availability of contingents able to express a strong deterrence in order to be credible. From this point of new, the attack helicopter units are particularly suitable for developing actions of high value and visibility (area security, armed reconnaissance, armed escort to convoys and units, etc.).

Similarly, in classic operations, the attack helicopters can carry out precise, timely and powerful interventions. Therefore, for a modern Army, it is essential to have such an important component, compatibly with the high costs it entails.

Finally, the combat function requires, in special circumstances, the combined employment of attack helicopters, light infantry, transport and combat-support helicopters. The combination of these elements forms the **airmobile forces** complexes, which develop their manoeuvre starting to fight from the air and continue on the ground until the target is conquered (an airmobile operation differs from the tactical transport of light-infantry units for the Command and Control capabilities that the complex of forces must possess, in view of the combined employment in time and space of resources of different kind, as well as the active participation of combat helicopters in all phases of the action). The consequence is that specific resources must be assigned also to airmobility.

COMBAT SUPPORT FUNCTION (ARTILLERY - ENGINEERS - ARMY AVIATION)

Land Artillery

The fire support to any land operation will continue to be a fundamental necessity also in future scenarios.

In **peace support operations** (asymmetric conflicts) the employment of land artillery has an outstanding role, especially as concerns **deterrence**, pursued through the visibility of the deployments and the development of an effective training, which can also assume the aspect of demonstration activity (similar considerations could also be made for determinate requirements of **control of the territory**). However, in case of actual employment of fire, it is essential to be able to operate with extreme precision and selectivity in order to "surgically" hit the objectives - often mingled with the civilian population - without collateral damage which, among other things, could cause a



dangerous drop in consent. Such results can be obtained through a careful preparation of the interventions and a direct fire control by advanced observers, as well as with appropriate weapon systems. In this kind of operations the single-barrel artillery units (cannon/howitzers and mortars) can operate down to platoon level.

In **operations of classic warfare** (symmetrical conflicts), the NATO doctrine envisions the fire support of land artillery in its two components of general support and direct support. The **general support** one is employed - as a whole and on a single direction - in favour of the main Unit (Corps/Division) and consists of the longer-range units, both single-barrel and, especially, multi-barrel (surface/surface missiles and multiple rocket launchers). The Artillery of **direct support** operates in favour of the Brigades or of a group of forces with autonomous tasks (Regiment, Combat Group) which in any case support contact operations and must be normally equipped with single - barrel systems.

Talking about the **organizational level** of resource allocation, one should consider the possible future developments of the sector; also in the international setting. At present, the only road to follow seems to be that of grouping at COMFOTER level the longer-range artilleries (missiles and rocket launchers) and some howitzer/cannon units for the role of general support, keeping the present artillery component at regiment-level in each Brigade for direct support; to the Intermediate Command level, one would leave only the capability of fire employment, ensuring the availability of an Operational Centre of Fire Support (Centro Operativo per il Supporto del Fuoco (COSF) to manage the artillery units destined to COMFOTER.

Antiaircraft Artillery

In general, the new operational concept of the antiaircraft artillery provides for the employment in operations to be implemented

through the aggregation of elementary modules into complex A/A systems called "clusters".

"Elementary module" means a whole formed by active systems (weapons), Command, Control and Communication systems and by techno-logistic support systems capable of ensuring a single antiaircraft function (V/SHORAD, SHORAD, medium-altitude defence, antimissile point defence). A **"Cluster"** is instead a set formed by several elementary modules, which includes and integrates complementary weapon systems capable of supplying an omnidirectional area-and-point coverage, from very-low to medium altitudes. It includes (when available) an antimissile capability for the defence of vital points. The "cluster" is at the orders of the Commander; and must be included in the more general frame of the Integrated Air Defence (DAI).

With reference to the **peace support** operations, normally the risks to be prevented and/or confronted exist within a generalized air supremacy of the friendly forces and show the insidious characteristics of the terroristic use of the weapon systems. It will be therefore essential to give first priority to the preparation of at least one A/A cluster in such a configuration as to ensure the coverage of two-three Brigades under a single divisional command (HAWK, Stinger and SIDAM systems). The following step could be that of integrating the divisional "cluster" with an A/A light component (SKYGUARD - ASPIDE system) and having a techno-tactical component for the possible C2 integration requirements and in-Theatre airspace management, envisaging moreover the ability to identify the faction responsible for the possible attack; carry out the units' rotation; adjust, for all systems, the logistic support, at present gauged for operations on the national territory.

As far as the employment

within the national territory is concerned, it is indispensable to maintain the operational capabilities of the national component of DAI (HAWK Systems) at ACE standards.

Engineer Corps

The tasks assigned to the Engineer units vary in conformity with the organizational level in which such units are to be included and the type of operations that are going to be carried out (generally classic warfare or peace support).

In particular, **the units under the direct command of COMFOTER / Logistic Inspectorate** will be able to operate in a decentralized way with time and/or employment restrictions and will perform activities which will concern the practicability of the main roads (overcoming wide interruptions with road and/or rail bridges, crossing of unfordable water-courses with the employment of pontoon bridge equipment, construction/restoration and management of railroads and/or rail yards, strengthening of port installations, etc.) and the general support (acquisition/production and distribution of electric and water resources, setting up of lodging facilities, POL pipelines of limited capacity and length, etc.).

The units subordinate to the Intermediate Operational Commands and to the Brigades will instead take care of the activities concerning the practicability of secondary roads (overcoming of small interruptions, opening of roads), the protections of the units (building of field fortifications, assistance to camouflage, etc.), and of the activities of direct support (clearance of explosive devices, anti-obstacle operations, contribution to the planning of structures, etc.). A separate mention should be made for the **classic function**, not cited

before, of **countermobility** vis-a-vis the opposing forces. It is a common belief, in fact, that in the modern conflicts, also the symmetric ones, this function should be almost completely reconsidered. In particular it should be kept in mind, with reference to the active obstacle, the **ban on inhuman weapons**, among which one should mention the anti-personnel mines. In view of this, the countermobility should be conceived essentially through the passive obstacle (with a lot of attention, in any case, to the potentially heavy repercussions on the environment) and large recourse to **non-lethal weapons**.

Moreover the Engineer Corps will continue to be the component with the highest value for interventions in case of disasters. It seems quite probable that this type of activity (disaster relief) could also concern Theatres outside the national territory.

ARMY AVIATION (AVES)

The AVES units participate in the performance of three fundamental operational functions: combat, combat support, combat service support.

Here we shall refer to AVES as concerns **combat support**, within which it operates in two distinct sectors:

- **fire support;**
- **operational assistance.**

Fire support, in peace keeping operations, has essentially functions of deterrence and show of force, security of other forces (covering Force Operation), and surveillance.

In operations of classic war, also actions of counterattack and countermobility are added to the abovesaid activities.

- **The operational assistance** is carried out in every kind of operation, in a wide range of activities, among which: search and rescue, reconnaissance and surveillance, fire direction and

electronic warfare.

The operational capabilities required from the AVES units, due to their specific function of combat support, can be described as follows:

- outstanding operational versatility and flexibility;
- adequate fire power;
- high transport capability;
- capability of night flight given by devices for instrumental flight and night vision.

Of course the AVES employment in a scenario "saturated" with fire delivery means, aircraft of other Services and other nationalities, presupposes the availability of command and control and airspace control systems interoperable with similar systems employed in the same scenario.

COMBAT SERVICE SUPPORT

The functional logistic chain, on three rings, practically has already been transferred on **two rings**, in order to confer wide flexibility and cost-effectiveness to the instrument, through centralized and automated management at central level and a support closer to the operational forces. The logistic organization therefore is divided in two areas:

- **logistic support area** under the authority of the Inspectorate of the Service;
- **logistic adherence area** located within the operational component and therefore dealt with in this paragraph.

In order to confer efficiency and continuity to the logistic support - an essential prerequisite for the success of any activity - one should ensure a harmonious allocation of resources and capabilities at the various organizational levels.

To this end, COMFOTER should have specific capabilities in order to ensure the continuity of the logistic function, originated in the support area, up to the units, both for the operations on the national



territory and for those outside it. Therefore it should be able to avail itself of units at Regiment level, constituted by elementary modules, each having the capability to activate terminals, to move and maintain the material coming from the support, transportation and traffic-control areas.

The **Intermediate Operational Command**, expected to become projectable, must have the ability to activate logistic formations for the support of units operating under its Command/Control and in particular, to activate the Divisional Support Group capable to manage, in case of Lead Nation, the National Support Elements (NSEs) of other countries.

Brigades and Regiments must have extremely mobile executive organs, strictly adjusted to the requirements connected with the average cases of employment and without overloads, in line with the new "from rear to forward" philosophy of logistic support.

In fact, the supplies will be delivered "at home", with a centralized management of transport, and executive organs acting as "agencies" in charge of control and distribution; the supplies of the in-Theatre operational units will be limited,

because the necessary material - stored during the planning phase on the basis of the consumption rates observed during similar operations and projected only for a limited part into the Theatre - will also be delivered "at home" during the operation, in accordance with the actual consumption.

The **maintenance** activity will be carried out, especially for the out-of-area operations, by making emergency interventions as forward as possible and by replacing entire weapon systems and pieces of equipment. Rapid interventions by "contact teams" will therefore be envisaged, together with the delivery to the unit of the serviceable equipment - coming from suitable stocks - and the simultaneous removal of the unserviceable material, which will successively be repaired by the support branches at specialized centres oriented towards specific yards.

As for the in-Theatre **medical support** only the interventions connected with emergencies will be considered "as forward as possible" while for the delayable interventions and for hospitalization and treatment a timely removal to rear structures or repatriation is envisaged.

The in-Theatre projection of

intermediate structures with adequate capabilities could be taken into consideration for particular operational environments, especially for humanitarian interventions in favour of the local population. Finally, it should be remembered that the combat service support avails itself also of AVES resources, both already devoted to other functions and specifically assigned.

NBC DEFENCE

In the modern operational scenarios, the nuclear threat has become less massive and impending. But, meanwhile, there has been an increase in the chemical threat, which could appear also in peace support operations and on the national territory, as a consequence of accidents at industrial plants or through terroristic actions.

In view of this, it seems necessary to have NBC defence capabilities, not only at the individual serviceman's level, but **also at COMFOTER and/or Intermediate Operational Commands level**, so as to reconcile the need to concentrate the necessary specialistic resources with that of ensuring adequate levels of presence on the national territory. For the aforesaid Commands one could envision company-level units, equipped with adequate personnel and means, capable of operating also by segments to be detailed according to need; or the resources could be concentrated in a COMFOTER regiment/battalion, organized in company-level modules, detachable when necessary.

PSYCHOLOGIC OPERATIONS

PSYOPS constitute a power multiplier, both in classic warfare and in peace-keeping operations. In the traditional operations they

are one of the mainstays of C2W (Command and Control Warfare) while in the peace-support operations they are the instrument which **together with CIMIC** (Civil-Military Cooperation) and **public information**, permit to obtain and maintain the consent to the operation.

Being an operational function of outstanding specialization, it can only be entrusted to specifically structured units, equipped and trained to conform with those existing in other Western countries.

Such units should be able to sustain the psychological activity of a group of forces at Intermediate-Command and Division level, and therefore, in harmony with what occurs at NATO, be able to ensure: a contribution to a possible CJPOTF (Combined Joint Psychological Operation Task Force), a capability for the moment expressed only by the United States, Great Britain and Germany; 2-3 PSE (Psychological Support Elements) as reinforcements to a Division Command and to the Brigades; at least six TPT (Tactical Psychological Teams) as reinforcements to the Regiments.

OPERATIONAL CAPABILITY PACKAGES

If the individual operational capability is represented by the basic module - in terms of units, measures, equipment and resources - which is in a position to carry out one of the functions mentioned above, **the package of operational capabilities is made up by a harmonious whole of single capabilities with the purpose of carrying out a specific mission.**

Proceeding from what was stated above, one should **make up four "capability packages"** in accordance with the requirements, which constitute also the aims to be attained. In particular:

- 1) the **"Projection Forces" package**, destined to the defence of the external interests and the support to international security and stability. **Objective:** to enable the Army to project a Division Command, with the relevant Supports, and two Brigades in a single operational Theatre or to employ the second Brigade in a separate Theatre; to ensure, moreover, the rotation of Commands and units in case of long-lasting operations (operation cycle of more than 6 months). This would translate into having the availability of:
- 2) **"Reaction Forces" package**, destined to contribute to the common defence within NATO. **Objective:** to enable the Army to fulfill the commitments taken on by our Nation with NATO, consisting of a Division Command, Supports and five Brigades. **The Projection and Reaction packages** form, on their whole, **the forces prepared for the employment outside the national territory.** In total they require, as we have seen, three Intermediate Commands and nine Brigades. Nevertheless, considering that it is highly improbable that a NATO engagement and an "out-of-area" one occur at the same time, the complex of forces to be assigned to Projection/Reaction is not the total of the two packages but their "least common multiple", namely two Intermediate Division-level Commands and seven Brigades;
- 3) **"Presence and Surveillance Forces" package.** **Objective:** to ensure specifically the defence of the national territory - which, in any case, is a priority also for the projection and reaction packages - and to fulfill the requirements of contribution to the maintenance of public

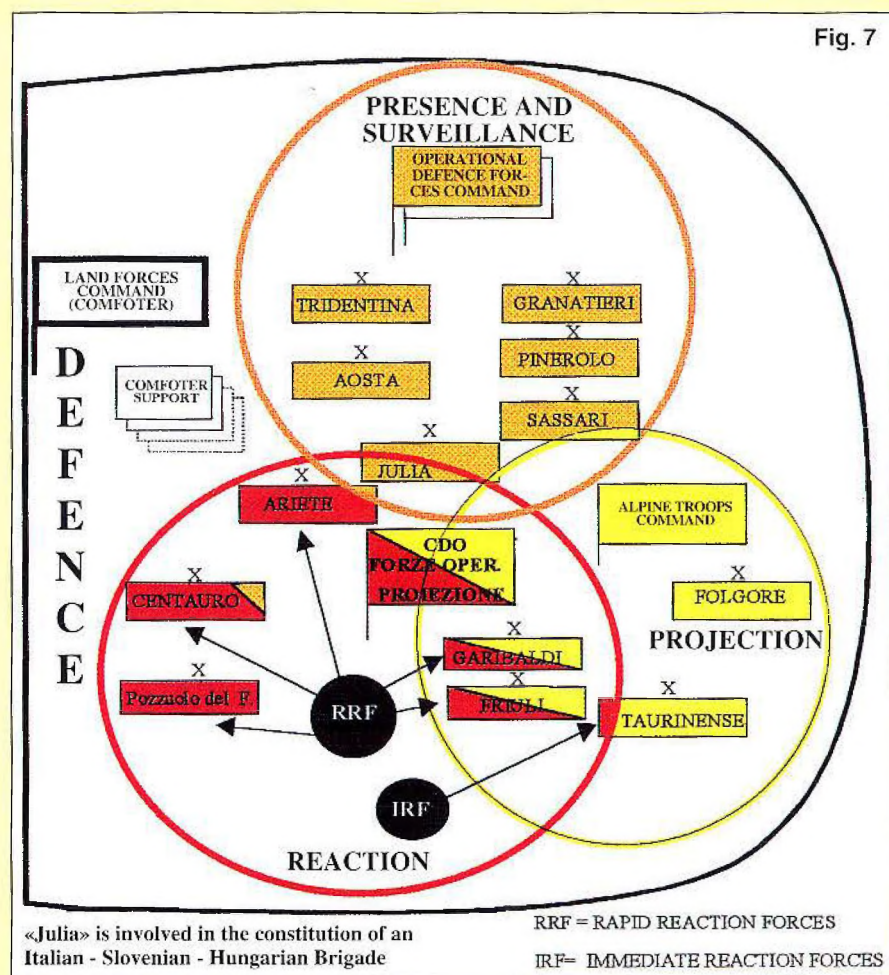
4) **“Defence Forces” package** which includes the forces of the abovesaid packages, the Command organs that have to employ them, and the remaining Supports.

In **fig.7** a schematic example of the packages' configuration limited to the main Commands and to the Brigades.

What is described in **fig.7** is only an “example” of the concrete realization of all the reasonings made until now as regards the operational component of the Service. In order to completely

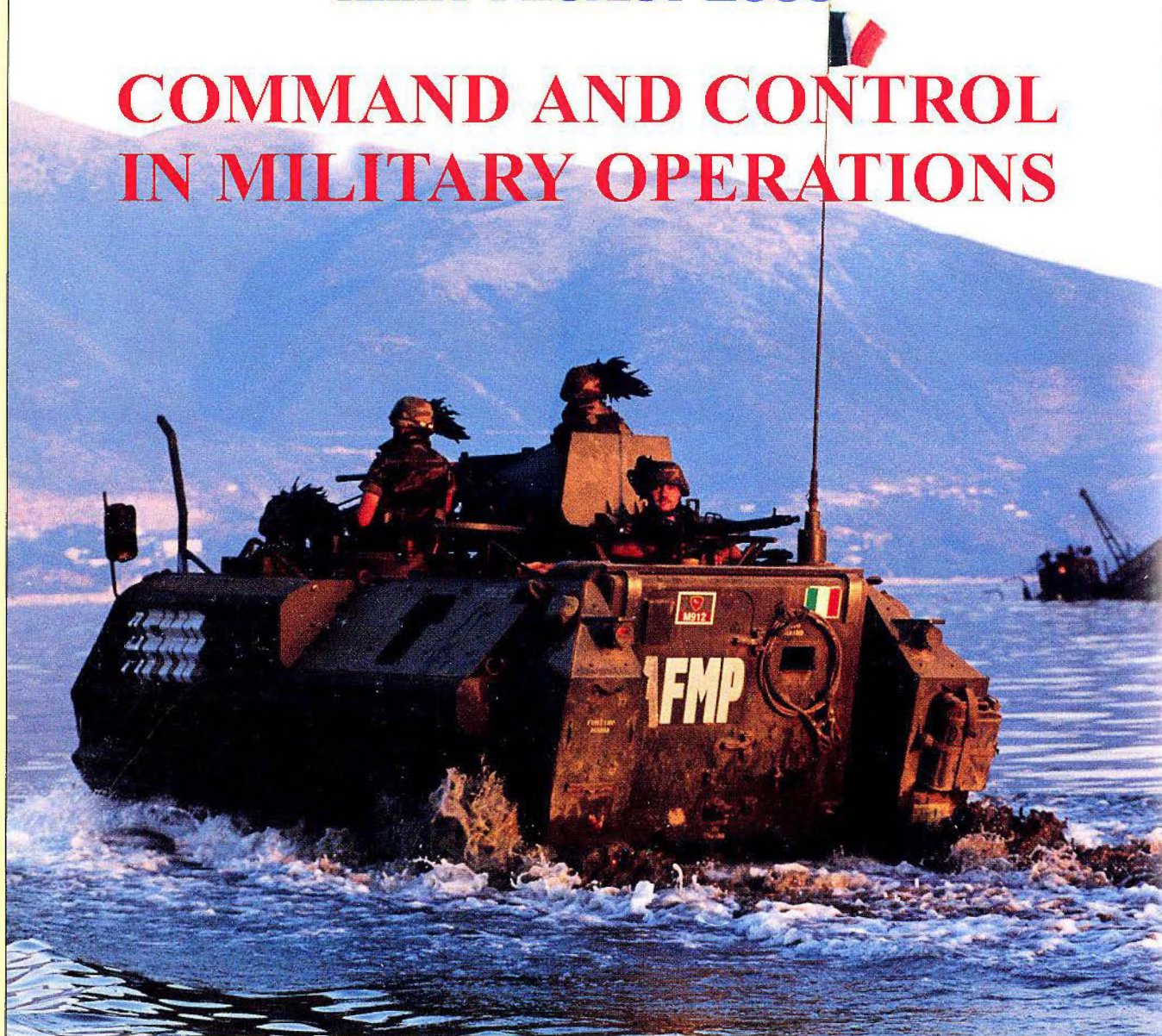
In fact, it must not be forgotten that, on the basis of the envisaged operational

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ARMY PROJECT 2000

COMMAND AND CONTROL IN MILITARY OPERATIONS



by Ivan Felice Resce *

The function of Command and Control is the connective tissue of any complex of force, be it structured in standard formation or assembled-as it is more often the case in the present scenarios-according to the "task organization" principle. It is through

Command and Control, in fact, that the different operational capabilities are employed in a harmonious way, in order to express the synergies indispensable for the accomplishment of the assigned mission.

The contests in which modern operations, which are mainly multinational and multiservice, take place, exalt the importance of the function we are examining. In "standard"

formations, to be employed in national scenarios, Command and Control was normally practiced almost by instinct. It was based upon solid personal relations between Commanders and subordinates, as well as on procedures we could define as "homemade", whose effectiveness was guaranteed by daily experiences. It goes without saying that in the employment of multinational and multiservice forces, one should aim, on the

contrary, at clear relations between Commander and subordinates, as well as on standardized procedures, recognized and applied in the multinational environment.

The terms "Command and Control" (1) are integral parts of the function whose purpose is the exercise of authority, by a Commander on a complex of forces assigned for a specific mission. Simplifying the NATO definitions quoted in the box, we can say that "Command" is the process through which the Commander makes his decisions and transmits his intentions to his subordinates, while "Control" is the process through which the same Commander, assisted by his staff, directs and coordinates the activities of the forces assigned to him.

Command includes the concepts of authority, responsibility and obligation to act. Authority implies the exercise of "power" and the right to expect "compliance". Part of it is normally entrusted to subordinates, who in turn are invested with the responsibility connected with the degree of authority entrusted to them, without impairing in the least the delegating Commander's authority.

Responsibility is a unique concept. It belongs to individuals, and even when it is shared among many, the individual responsibility remains intact.

Obligation to act synthesizes the concepts of authority and responsibility, and implies the "accountability" of one's actions to the bestower of the authority.

Control must be understood mainly as a verification of the plans, directives and orders issued, to answer the following basic questions:

- are they clear;
- are they feasible;
- are they well executed;

- are they effective, i.e. are they appropriate for the achievement of the desired result.

It is, therefore, an indispensable instrument for the direction and coordination of the activities. The term must therefore be emptied of any punitive meaning.

Control is exercised using **procedural measures** and **positive measures**.

Procedural measures are those established in advance and concern sector limits, lines for fire control, rules of engagement, etc.

The positive ones are the most significant, in that they are directly applied during the execution phase. Their application requires personnel mastering profound knowledge and tested experience, but specially advanced and innovative technologies - electronics, automation, informatics, satellite communication - aimed at observing, collecting, processing and transmitting information data in real time. Command and Control is exercised in all conditions: peace, crisis, conflict, operations different from war. No doubt the most difficult conditions are those of conflict, which are generally characterized by uncertainty and permanent risk.

An effective action of Command must be based on three fundamental parameters: timely decisions, perfect understanding of the intentions of the higher Commander, clear

responsibility of the subordinates to operate in line with those intentions. In substance, Command must aim at accomplishing the mission (2), be it of training or operational character. The application of the concept "command intended for the mission" requires a command style aiming at encouraging decentralization of authority, freedom of action and initiative. The key point of the concept is the relation between Commander and subordinates:

• **the Commander:**

- gives orders in a way that makes him feel sure that his subordinates understand his intentions, the mission to carry out and the context within which the mission takes place;
- explains in a clear manner the results to achieve, and the reason why they must be attained;
- allocates the resources necessary to accomplish the assigned mission;
- applies minimal measures of control, safeguarding the freedom of action of his subordinates.

• **the subordinates** decide, within their freedom of action and the authority entrusted to them, how to accomplish the assigned mission in the best possible way.

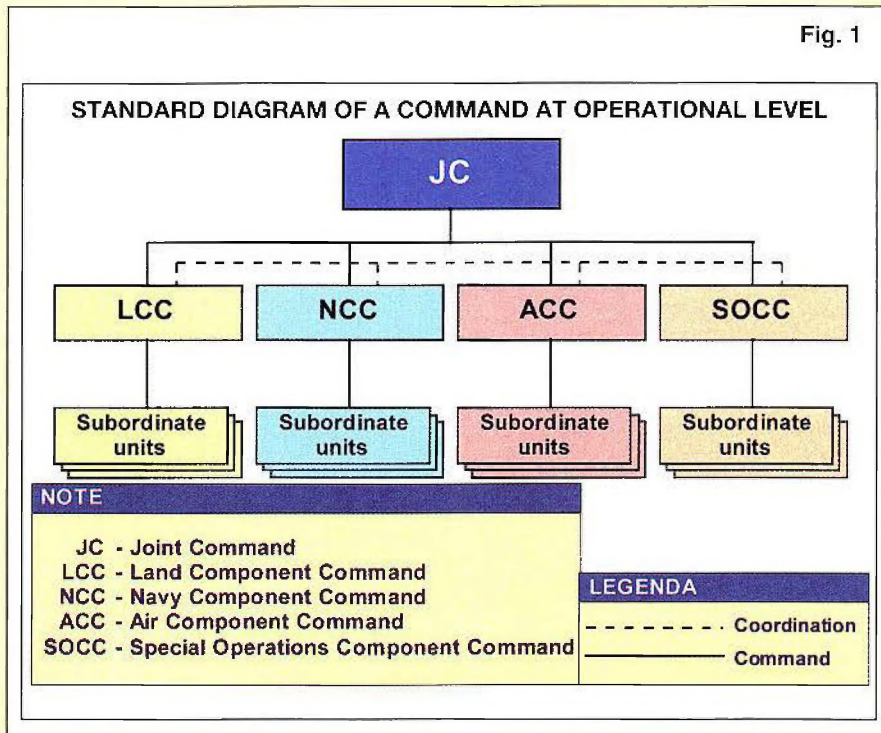
The concept "Command for the mission", to be effectively applied in operations, must be experimented daily. It is based on some basic principles, such as:

- unity of efforts, to be achieved through the conscious and

COMMAND: *authority entrusted to a Commander for the direction and control of military forces (AAP-6).*

CONTROL: *authority exercised by a Commander on part of the subordinate activities and structures normally not under his command. It implies the responsibility of implementing orders and directives (AAP-6).*

Fig. 1



committed involvement of all "actors".

- decentralization of authority, to guarantee the respect of the responsibility of each Commander;
- mutual confidence between Commanders and subordinates;
- understanding and sharing of intentions, orders and respective requirements;
- timeliness of decisions.

Nevertheless, the application of the concept "Command for the mission" should not be considered a dogma.

It must be adapted to the situation, also depending on the command style of the individual Commander and his knowledge of his subordinates.

THE THEORETIC MODEL

Command and Control is, therefore, one of the most complex and sophisticated functions. It is thus considered appropriate to describe it through the presentation of a theoretic model referred to a generic operation, and then to

probe into the conceptual elements with reference to concrete cases.

Levels of responsibility

Military operations originate from a decision of the political authorities, who recognize that this manner of intervention is the most suitable to achieve a specific objective, generally connected with the security of the Nation or of the Alliance.

It is therefore the political authority that, with the technical advice of the military, formulates a mandate and entrusts it to an Operation Commander who, under the military profile, becomes the only person responsible for it.

Naturally, the same Commander is assigned the resources and the command authority to use them. He entrusts part of his authority to the subordinate Commanders, each of whom becomes responsible for a specific component or sector. Therefore, the conduct of an operation invests three levels of

responsibility: strategic, operational and tactic.

The strategic level is at the politico-military top, either national or Allied. At this level - as we said - the mandate is formulated, the resources are defined, and the authority and responsibility to fulfill the mandate are given to a Commander, specially designated for the job.

The operational level, specifically military and generally joint, is the vital connection between the politico - strategic objective and the employment of the forces. At this level, in fact, the political mandate turns into military objectives and the operation is conceived, organized and conducted with a unitary vision.

The tactical level is normally Single Service. At this level, the operation is conducted by component or sector of responsibility.

The three levels are not separated by clear borders and are not associated with headquarters of pre-established rank. Any activity will belong to the strategic, operational or tactical level, based on the results it produces for the operations. What we can say with certainty is that the operational level coincides with the Command to which the operation as a whole will be entrusted (Command of the Operation). This Command (fig.1) will normally have a joint structure in which the Component Commands of each individual Service are included.

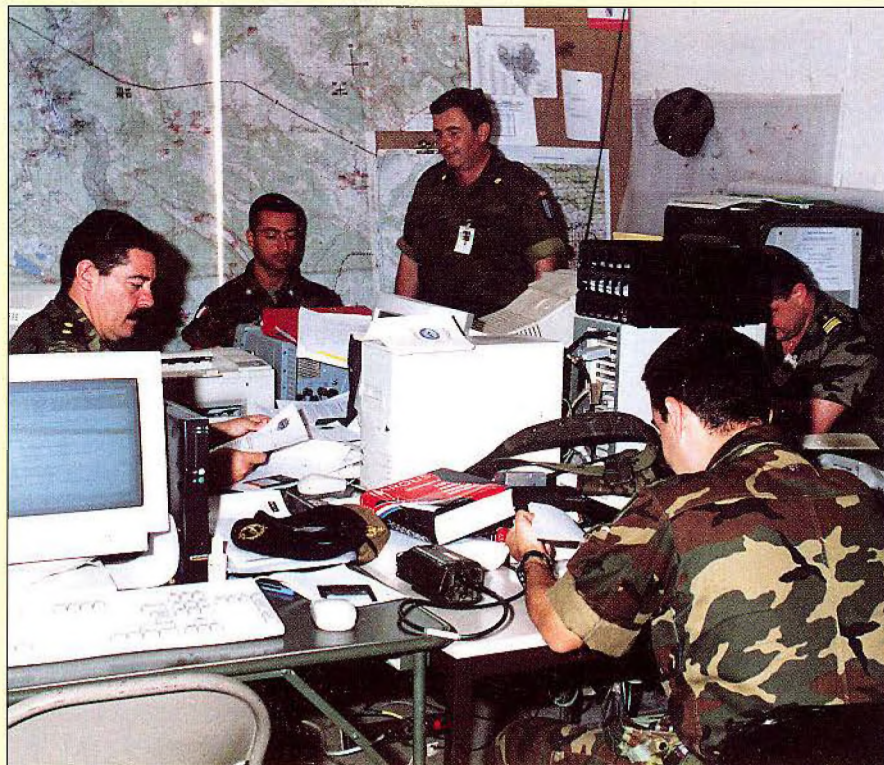
Chain of Command and Control

The levels of responsibility, as a whole, define the chain, or structure, of Command and Control which is a specific feature of each operation, in that it is devised in relation with the

type, the context and the scenario of the action.

The definition of the chain of Command and Control - which is one of the basic actions for the start of a military operation - presupposes the respect of simple but important rules. First of all, the command lines must be light and envisage only the command levels which give an "added value" of their own to the decision-making process. It is necessary to avoid structures with hierarchical relations "one to one", without demultiplication.

Another fundamental element is the scope of control, which must be strictly proportionate to the real capabilities of management of a command: as a general rule, no more than 5 or 6 elements.



Status of Command

If the level of responsibility (strategic, operational and tactical) refers to the responsibilities in the conduct of operations, **the status of command** refers to the assigned forces.

In this respect, the Alliance has codified the following command authorities (3) which indicate precisely the status of the Commander vis-à-vis the forces assigned for the specific mission.

- **Operational Command:** authority given to a Commander to assign missions or tasks to the subordinate Commands, to deploy units, to reassign forces, keep or delegate Operational and/or Tactical Control when necessary. It does not include logistic and administrative responsibilities.
- **Operational Control:** authority given to a Commander to manage the assigned forces for the fulfillment of specific missions or tasks - limited in

time, space and functions - deploy units, keep or delegate Tactical Control of the forces. It does not imply the authority to employ components of the assigned forces for the fulfillment of tasks/missions different from the assigned ones;

- **Tactical Command:** authority given to a Commander to assign tasks to the forces under his command, for the fulfillment of the mission assigned by an authority of higher level;
- **Tactical Control:** detailed management and control - generally limited in space - of the movements and manoeuvres necessary for the fulfillment of the missions or tasks assigned.

Organization of Command and Control

Each Commander, to perform his mission, needs a specific organization of **Command and Control**. In a general sense, an "organization" is defined as a

body of one or more persons working in a coordinated manner to pursue a common goal. In a military sense, an organization planned to support the exercise of Command and Control includes:

- **personnel**, consisting of Commander, Staff, Liaison Officers and possibly specialized assistants;
- **standardized procedures**, among which those relevant to the decision-making process, the compilation and circulation of orders, directives and plans;
- **Automated System of Command, Control, Communication and Information (C3I);**
- **Headquarters Command**, in charge of logistic and administrative support, security and protection of the Commander and his Staff.
- The focal element of Command and Control is the Commander. The result of a mission depends largely upon his competence, his initiative, his capability of inspiring confidence and of



uniting and involving men and units. He has the authority and responsibility of employing the assigned resources, and answers to the higher Commander - and in the last analysis, to the Country - on the results achieved.

The staff, prescinding from the level of command, has two main roles: to assist the Commander and support the units.

The main duty of the staff is to inform, advise and assist the Commander in his decision-making activity. In this very delicate role, the staff concentrates on the two main aspects of control: coordination and monitoring.

As for coordination, the staff supports the Commander collecting, processing, analyzing and presenting information, in order to make it easier for him to select the most effective line of action. The staff is therefore responsible for planning, drafting and distributing the **measures of control**, normally issued in the form of orders.

As regards **monitoring**, which normally occurs together with coordination, the staff plays an essential role in the dynamic

mechanism of feedback, necessary for a timely decision-making activity aimed at adapting the orders to the changing situation.

Another important function of the staff is the support of subordinate formations and units. Their capability of survival, training and combat depends in a large measure upon the actions of the staff of the higher Command "*...the staff must be the servant of the troops; this means that a good staff Officer must serve his Commander and the troops, remaining anonymous*" (4).

The efficiency of a Command depends on the capability of the staff to work in a timely, competent and cooperative

manner. The staff must not keep the available information for itself. It is a precise responsibility of the staff to make sure that all important pieces of information are timely retransmitted to all those who need to know, i.e. same level and subordinate units.

Procedures are another basic element of Command and Control. Any kind of operation goes through three main stages: conceptual, organizational and executive phase. Moreover, once the operation is launched, the three phases are repeated in the course of time, in relation with the development of the executive phase and the changing situation.

The most qualifying moment of the conceptual phase is **decision**.

"Decision-making" is a fundamental prerogative of the Commander, and stems from a set of activities and interactions between the Commander and his staff, which goes under the name of **decision making process**.

The process starts at the beginning of the operation and takes on a cyclic connotation in the conduct phase, when it must combine in a harmonious way the development of the operations under way with the planning of the future ones.

The time available to reach an executive decision is a fundamental element of the process. Normally, the more

THE METHOD FOR THE SOLUTION OF OPERATIONAL PROBLEMS INCLUDES

- analysis of mission or task;
- evaluation of situation factors;
- individuation of possible own lines of actions and comparison with "enemy's possibilities of action";
- Commander's decision, expressed in a synthetic but precise concept of action" or "manoeuvre plan".

instable the situation and lower the level of the interested Commander's responsibility is, the more reduced is the available time. It is therefore self-evident how important it is to have a standard "method", but characterized, at the same time, by a marked flexibility making it adaptable to all conditions of employment.

The method, in substance, represents a logical - systematic procedure, a guide for the study of complex problems.

The Commander's decision sets the organization phase in motion. Then the decision turns into directives, orders and plans.

The basic document is the "operation order". It is a standard document which contains all the elements for the development of an operation. It is divided into 5 parts, plus some annexes referring to information, fire employment, use of the engineers, etc.

Essential elements of an order are *clarity* and *timeliness*.

An indispensable condition for an effective command action is that of guaranteeing that the smallest unit and the individual soldier receive clear orders in time to start the activities that concern them.

It is barely worth to underline that one of the prerequisites of interoperability between Commands of different nationality or Service is the availability of standardized procedures.

The C3I (Command, Control, Communication, Information) systems meet requirements which are irrenounceable in the modern operational contexts, where the informative advantage over the enemy or the environment is an essential condition for success.

The C3I of the Army consists of SIACCON (Automatized Command and Control System)

THE DOCUMENTS OF C2 (AAP-6 NATO)

DIRECTIVE: form of written communication by which general instructions are transmitted, or the execution of a well defined action is ordered.

ORDER: written or verbal communication by which the Commander transmits his intentions to his subordinates.

PLAN: term used, instead of "order" in a planning made according to intervention hypotheses. An operation plan can be made executive at a certain time or by order.

OPERATION ORDER (STANAG 2014)

1. Situation:

- enemy forces;
- friendly forces;

2. Task (of the authority issuing the order);

3. Execution (which must include):

- concept of action;
- composition and organization of forces with respective tasks;

4. Logistic organization;

5. Command organization.

and CATRIN (Integrated Transmission Field System).

SIACCON is destined to support the Command and Control function with particular reference to:

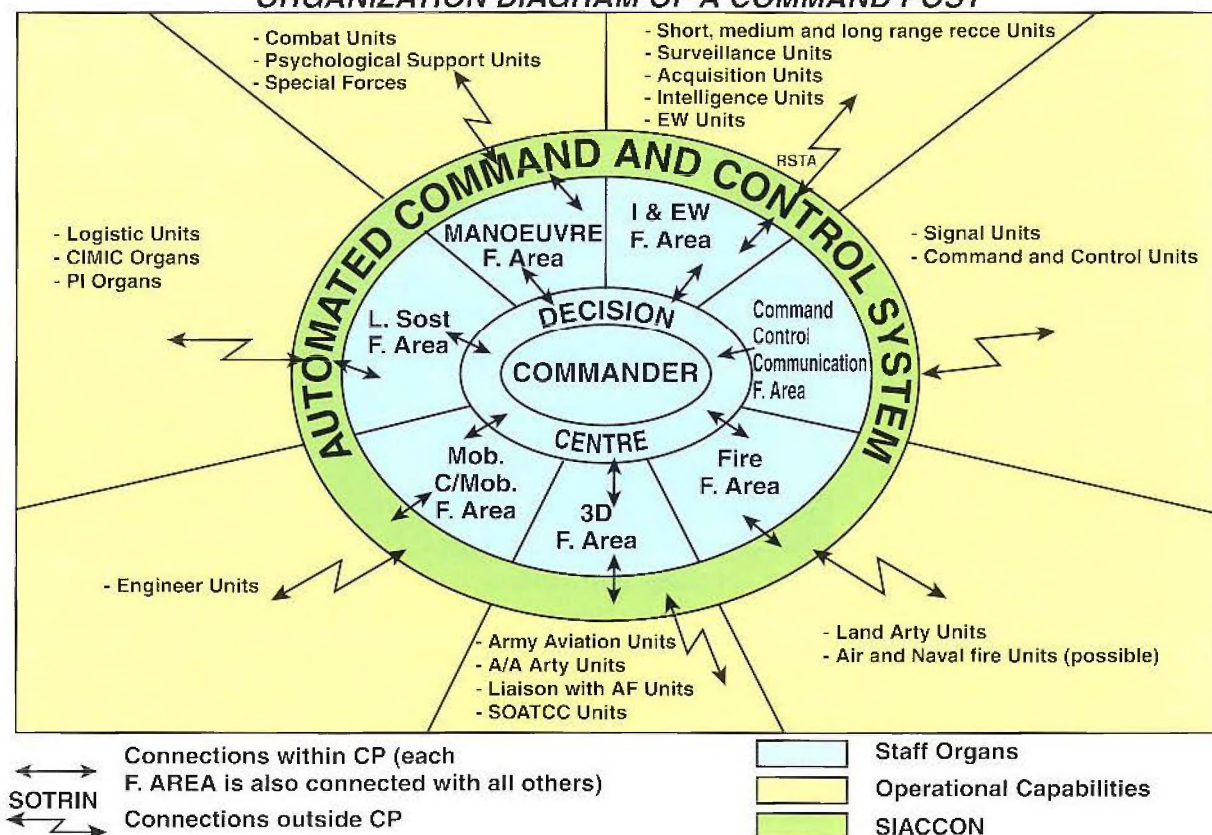
- **Command:** support the decision-making process and circulate the relevant orders with adequate speed and reliability;
- **Control:** point out the gap between the hoped results and the achieved ones. The software realized in SIACCON consists of five modules:
- the **Data Base Module** which includes, among other things, personnel and equipment of the units engaged in the specific operation;
- the **Message Module**, for the management of messages, formatted according to international standards. The management includes the utilization of the content of the messages for the automated updating of the situation;

- the **Map Module** which contains the manipulation of the digital maps, with instruments as zoom, panning, distance calculation, drawing of the altimetric profile;
- the **Command and Control Support Module** permits the presentation of the situation map, showing friendly and enemy units, the geometry of the battlefield etc.;
- the **Interactive Planning Support Module**, which permits the manipulation of the "private" copy of each cell, in order to formulate hypotheses and ask the system for evaluations on the feasibility and effectiveness of the hypotheses singled out. The architecture of the System envisages a Centre for the Analysis and Selection of Information (CASI), the Fusion Centre (CF) and Decision Centre (CD).

CASI is divided into seven functional areas, subdivided into cells, as shown in the general diagram (fig.2).

ORGANIZATION DIAGRAM OF A COMMAND POST

Fig. 2



Within SIACCON, the **Dialogue between Operator and System** takes place using the method of functional icons and windows. The user is in relation with two environments, different albeit closely integrated: that of messages and the graphic one (presentation/planning).

SIACCON, as a whole, has the characteristics of a "distributed system" consisting of several Local Area Nets (LANs) referring to each Command Post, geographically interconnected (Wider Area Net - WAN).

All users connected to LAN can share situation data, processed and updated by the personnel in charge of the various cells.

CATRIN consists of a set of sensors, processing systems and communication equipment. It is divided in three subsystems:

- an areal basic **transmissive net**, integrated, digital and highly reliable and survivable

(SOTRIN) with centrals of various types, central radio systems, mobile radio terminals, radio links of various range, supervision systems of various levels, multiplex and cipher devices;

- a **system for the acquisition of the information (SORAO)** needed to outline the picture of the enemy situation, for a rapid decision-making process and to permit the best use of the available fire resources (longer range artillery). It includes several types of air sensors (Drones, MRPV and Creso) and land sensors (Counterfire Radars, Radars for the Surveillance of the Battlefield, IRT Laser Telegoniometres) as well as an information organization (Data Correlation Centres Net) projected for processing information and generating the enemy situation.
- a system for the coordinated

employment of the means that use the air space (SOATCC) above the operation area, able to meet the requirements of management and control of the air space, permit the exercise of C2 of the A/A artillery units and the Army Aviation, the diffusion of air warning. It consists of radars, a Report Centre, computer centres at various levels. The Army's C3I System must be able to "dialogue" with those of the main partners. This requirement is met by the Quadrilateral Interoperability Program (QIP) that through a software (gateway) module guarantees the interfacing of SIACCON with the equivalent systems of France, Great Britain, Germany and the U.S. The last, but not the least, component of an organization of Command and Control is the **Headquarters Command**. It consists of a whole formed by

personnel, equipment and material for the logistic-administrative support of the entire Command, and must be structured in such a way as to guarantee the projectability outside its quarters.

NATIONAL AND INTERNATIONAL STRUCTURES OF COMMAND AND CONTROL

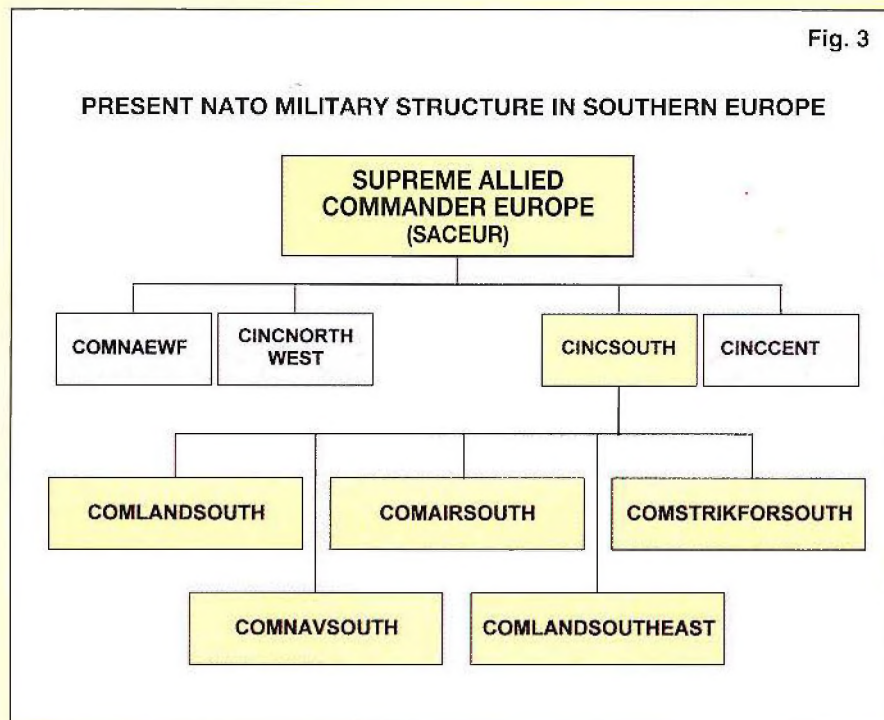
The conceptual and organizational elements described so far are concretely applied in the national and international structures of Command and Control. Before presenting the new structure of the Army, it is deemed appropriate to underline the most qualifying elements of the structures of the main international organizations that have been one of the references for the national solution.

The NATO Command and Control structure.

The present military structure of NATO (fig.3) aims at conducting military operations on the base of art.5 (5) of the Treaty, in pre-defined Operational Theatres. In it we can find all the elements described in the theoretic model. First of all, the levels of responsibility:

- the politico-strategic level, represented by the North Atlantic Council, which avails itself of the advice of the Military Committee for the military decisions;
- the operational level, whose responsibilities are divided between SHAPE and the Major NATO Commanders (MNC);
- the tactical level, normally found in the Principal Subordinate Commanders (PSC) and sub PSCs.

The command authority attributed to the NATO Military Commanders is established



during the planning phase on a case-by-case basis. In general, the command of the operations is entrusted to SACEUR who, at the moment of ToA ("Transfer of Authority"), assumes the operational command of the forces provided by the Nations. The Operational control is delegated to the Major Subordinate Commanders (MSC) and so on, as appropriate.

This structure, fully valid at the time of the confrontation of the blocs, has proved not completely suitable vis-à-vis the challenges of the "post-bipolar" environment. In fact, after the adoption of a new strategic concept, based on active prevention, and on NATO's commitment to conduct also "non-art.5" operations (6), the Alliance felt the need to establish a projectable Command (Rapid Reaction Corps). Subsequently, NATO commenced a specific study (Long Term Study-NLTS) aimed at starting a transformation process that in a short time will lead to the adoption of a solution similar to

the one schematized at fig.4.

But the most important aspect of the study is the concept of Combined Joint Task Force (CJTF), with the purpose to create the conditions of establishing and projecting, in an emergency, a multinational joint Command (CJTF HQ), capable of assuming responsibility, at the operational level, for the conduct of peace support operations. Permanent structures, in fact, are essentially static, and non-projectable, in that they are structured for planning and conducting operations in their respective areas of responsibility.

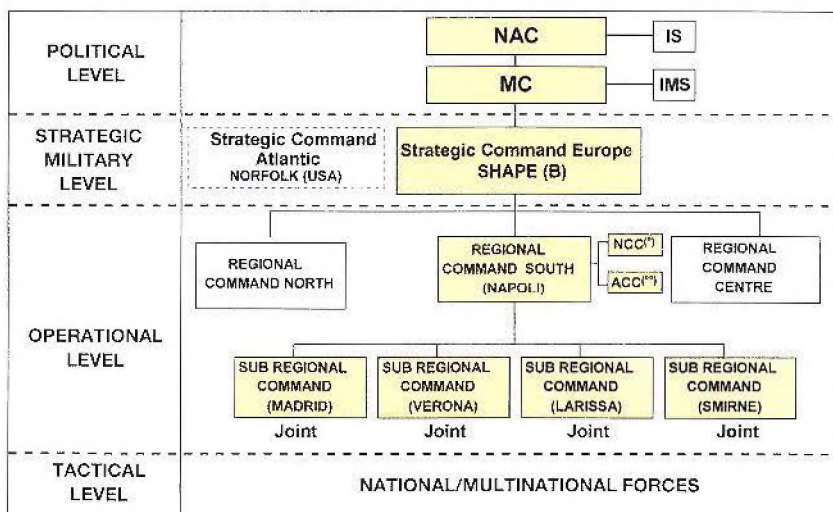
With CJTF, NATO intends to acquire the capability, at Regional Command level, to achieve:

- a more flexible and rapid deployment of forces, thanks to the availability of a "projectable" Command of adequate level;
- the integration of units from Partnership-for-Peace Nations into the Allied Command and Control system.

The CJTF (HQ) is formed by "filiation" (fig.5) from an

Fig. 4

POSSIBLE FUTURE ORGANIZATION OF NATO MILITARY COMMANDS IN SOUTHERN EUROPE



(*) Navy Component Command. (**) Air Component Command.

Command and Control structure in WEU

From the military point of view, WEU operates in line with the "Petersberg Agreements", which define the scenario within which the organization could be called upon to intervene. For the conduct of operations, WEU, at present, has at its disposal only the politico-strategic level, i.e. its own Council. As for the military structure, it avails itself of existing Commands (national or multinational).

In this perspective, the WEU document CM (93) - 7, part I envisages:

- Command of the Operation, not deployable in the theatre, with the Operation Commander;
- Command of the Force, deployed in the Operation Theatre, with the Force Commander.

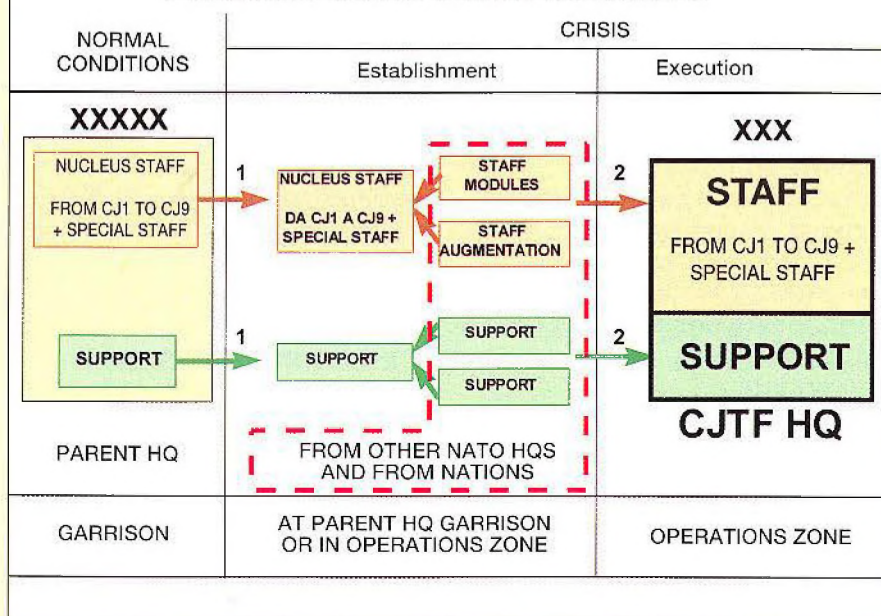
The WEU document does not clearly describe the Authority status attributed to the two Commanders, which will have to be defined in relation with the case of employment. Reading the document, nevertheless, one can see that, in most cases, the Commander of the Operation will be given the Operational Command (OPCOM), while the Force Commander will have the Operational Control (OPCON). In his turn, the Force Commander can delegate, as appropriate, TACOM/TACON to the national/multinational forces that the various Nations will have assigned to WEU for the specific need.

Command and Control Organization in the UN

Also the UN, as WEU, does not have a permanent military structure. In the UN-led operations, the Operation Command is held by the

Fig. 5

PROCESS OF ESTABLISHMENT OF A CJTF HQ



already existing NATO Command, which takes on the name of "parent Headquarters" and is implemented by augmentees made available by other national and NATO Commands. The CJTF can be activated also for WEU-led operations, based on the principle of "separable-but-not-separate" structures.

In this regards, a special

mention is deserved by the all-continental initiative named European Security and Defence Identity-ESDI). Its emerging role within the Allied environment is a concrete witness of the European assumption of greater responsibilities in the defence sector, stating, at the same time, the need of maintaining a stable and safe transatlantic dialogue.

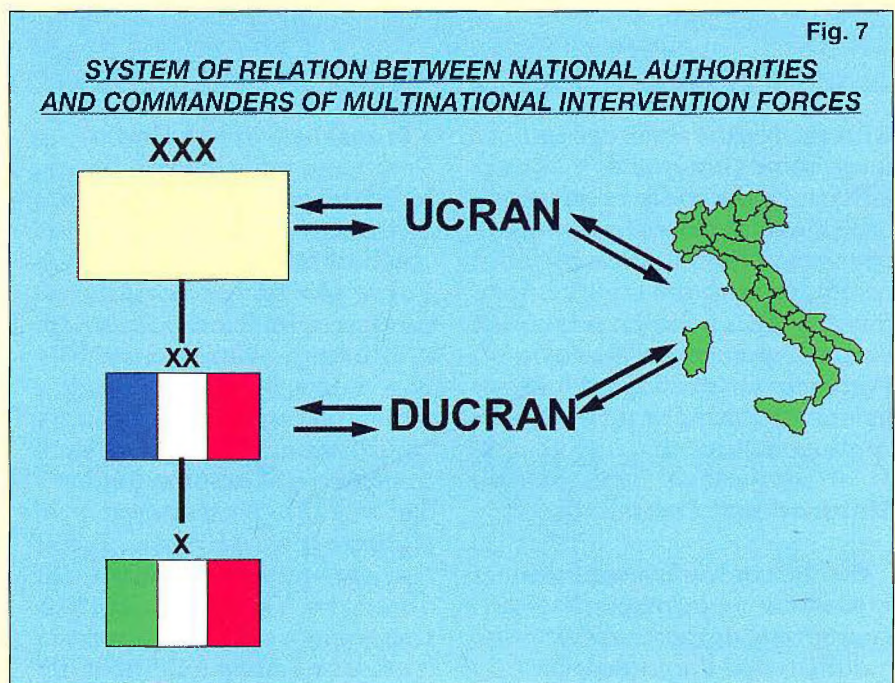
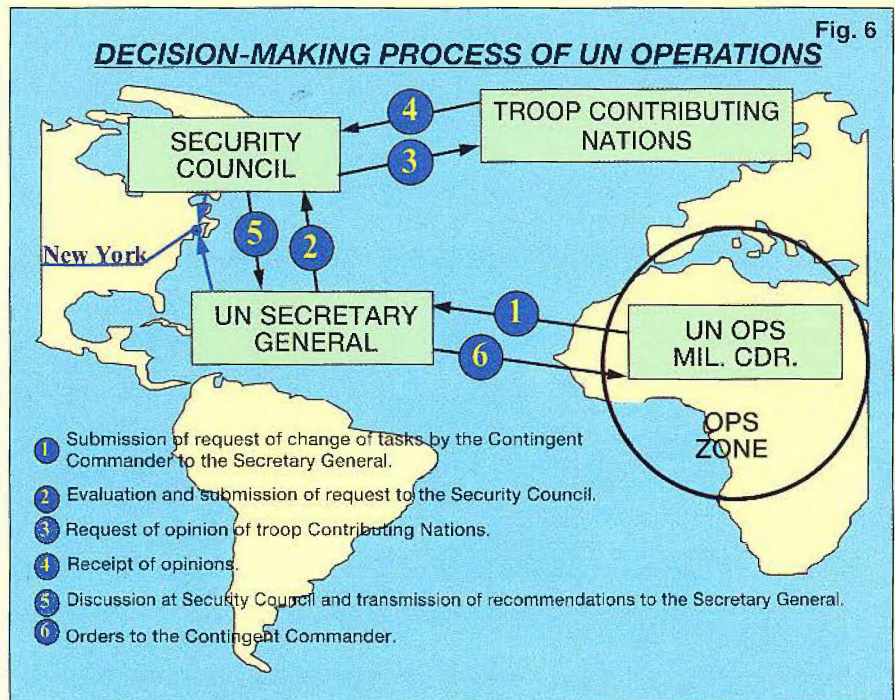
Security Council, which exercises it through the Secretary General, who avails himself of the Department for Peace Keeping Operations (DPKO) as a Staff organism. The Theatre military Commander, appointed each time, is normally given the OPCON. The experiences gained so far evidenced that one of the weak points in the operation under UN Command is precisely Command and Control.

The decision-making process to be activated in the conduct phase proves to be very complex and complicate in circumstances where - due to unforeseen changes in the Theatre situation - it becomes necessary to modify tasks and deployments.

As a matter of fact, in these cases (fig.6) the Commander of the UN Contingent must consult the Secretary General who, in his turn, informs the Security Council. The Council, after consulting the Nations which contribute troops to the operation, makes its decisions and transmits them to the Secretary General who, finally, informs the military Commander in the Theatre.

In Bosnia, the problem of Command and Control has been solved by giving the responsibility of the operation to a regional organization such as NATO, equipped with a well "run-in" organization of Command and Control and with standard procedures.

Also in this case, however, the contributing Nations, for socio-economic reasons, could not forgo the control of their contingents. In this perspective, the Commander in the Theatre has been granted an authority over the forces, corresponding to Operational Control. This warrant could prove insufficient in an emergency. This is the reason why Italy, profiting from the



experience gained in previous operations, appointed a Coordinating Officer Representative of the National Authority (UCRAN) and a Deputy UCRAN.

These General Officers have no authority over the national contingent, but work side by side with the Commander of the Peace Force and the Commander

of the Sector where the Italian contingent operates (fig.7).

The solution achieved the twofold goal of guaranteeing to the Italian authorities a supervision on the exercise of OPCON within the pre-arranged limits (adherence to the mandate) and the establishment, in case of emergency, a preferential and direct liaison



with the Nation, in order to meet, more timely and efficiently, the needs to adapt orders and deployments to the changes in the situation as compared with the original mission. This solution was deemed appropriate also by Portugal, which adopted it for its unit, included in the Italian contingent.

Multinational Commands

For the completeness of the exposition we deem it appropriate to mention the multinational Commands in which the Army participates.

Allied Mobile Force (LAND) HQ: part of the Immediate Reaction Force (IRF), it is a Command comparable to a Brigade Hq. It has a permanent structure built on a multinational base. It can manage 6-7 combat groups provided by the Nations (for Italy, "Cuneense" contingent).

From the point of view of Command and Control, the force is under the OPCOM of SACEUR.

Allied Rapid Reaction Force (ARRC): it constitutes the start of a "new course" in multinational structures. It is based on a British Corps Hq. which has been "multinationalized" with the inclusion of personnel from 11 Nations (8). Three more Nations (France, Spain and Norway) are present with observers. The ARRC Hq. is a Corps Hq. capable to exercise its Command and Control on its direct supports and on a maximum of 4 Divisions, to be drawn each time (according to the mission) from the 10 division-size formations made available by the Nations. The Army Corps is under SACEUR's Operational Command. The Italian contribution to this undertaking consists of:

- approximately 20 officers/NCOs

in the HQ. The most representative job is that of Deputy Commander;

- Hq. Framework Division (9) and five Brigades, 2 of which in the Italian Framework Division, 1 in the British Framework Division, 1 in the Multinational Division South (to be constituted) and one Brigade as Reconnaissance Unit in direct support to the Corps;
- other support units, among which: 1 Engineer Regiment and 1 A/A Artillery Regiment.

EUROFOR: it is a Command which originates from a politico-military initiative launched in 1993 by three Nations (France, Italy, Spain) with Portugal joining later. It is a Division-level Hq. permanently established in Florence, also with the goal to reinforce the European Security and Defence Initiative (ESDI).

The forces are made available at the moment of employment, on the base of the "on call" formula. The "typical missions" that can be assigned to this Command cover the whole spectrum of all possible interventions based on the new Western strategy of crisis management.

EUROFOR is therefore a Division-level land unit that, within the WEU, can alternately be:

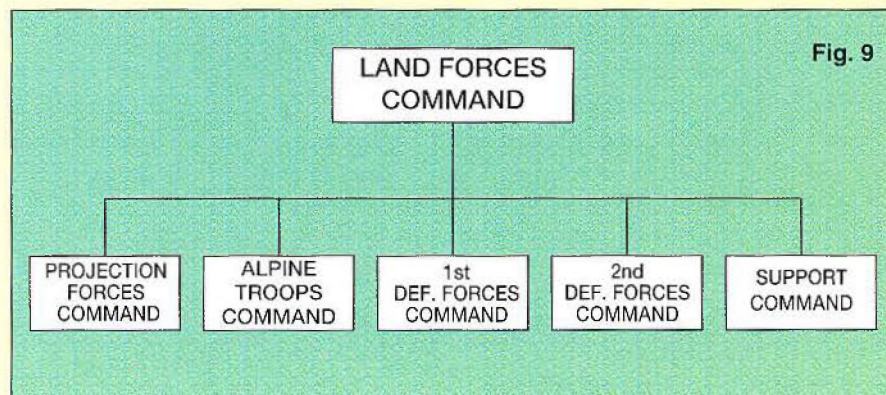
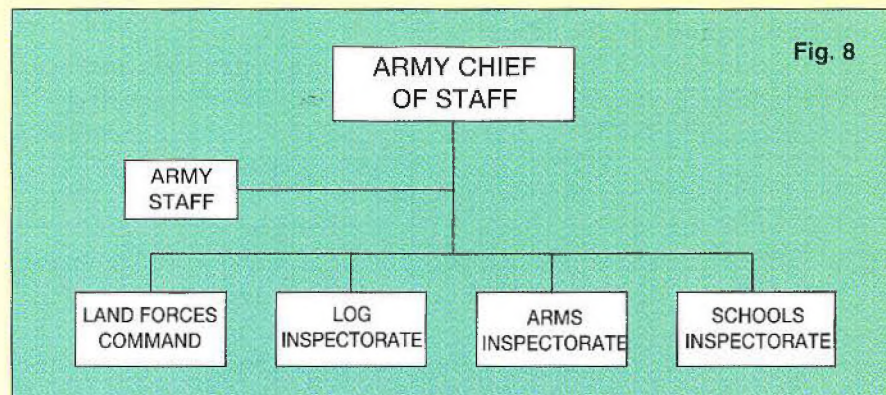
- the Command of the Operation;
- the Command of the Force;
- the Command of a land component or of an intervention sector.

Command and Control Structure in the Italian Army

One of the most qualifying measures concerning the military land instrument has been the reshaping of the Command and Control structure as a whole. The

objectives (fig.8) were essentially two:

- reduce the **scope of control**, through a reduction in the number of Commands/Agencies directly subordinate to the Army Chief of Staff (from 22 to 4, plus 3 Military Regions which will acquire a joint structure);
- clearly define the **Commander responsible for each area**, in order to give unity of direction to the functions of each component. Here, the examination of the new structure will be limited to the two components directly concurring to the development of military operations: the operational component and the logistic one. As far as the operational component is concerned, the Service felt the need to acquire, in the specific sector, capabilities no more limited to the requirements connected with the national territory. The increasing engagement in peace support operations and the remarkable integration of national formations in multinational complexes of forces - not NATO only - required a review of all operational functions and, as a consequence, of all Command and Control capabilities. This was done with the awareness that an active role in the international arena, to which Italy legitimately aspires, stems above all from the contribution of ideas, Command capability and credible forces, both for quality and quantity. In this perspective, the command structure of the operational component has been redesigned, in order to give the Commands marked capabilities of projection and expansion, for the conduct of joint and multinational



operations, at home and abroad - in the roles of:

- Command of the Force in the circumstances where Italy assumes the role of **lead nation**;
- Command of a sector in multinational contexts - not NATO only - both for peace support operations and for symmetric operations of medium and high intensity.
- Command of the Operations, by mandate of the Chief of Staff of Defence, in case of national operations characterized by a predominant land component. The Command and Control structure of the operational component (fig. 9) meets these requirements and, in general, is in line with the philosophy of the "capability packages" (10).

COMFOTER and all its subordinate Commands make up the basic chain of Command and Control for the conduct of large-scale operations connected with defence, in case

of threat or direct aggression against the national territory. The **Command of the Projection Forces (COMFOP)** is destined - as a first priority - to operations outside the national territory. It is a Command characterized by a marked operational versatility, completely projectable and already partially multinational through the integration in the staff of some Portuguese officers. When in garrison, it includes the Brigades of the "projection package", while in operations it can take on different configurations, the most important of which are:

- Corps-level (Headquarters), expandable in a multinational and joint sense, to be employed as "Protection Force Command" in case Italy is designated as lead nation as was the case for Operation "Alba".
- Division-level Headquarters, expandable in a multinational sense, to be employed, under

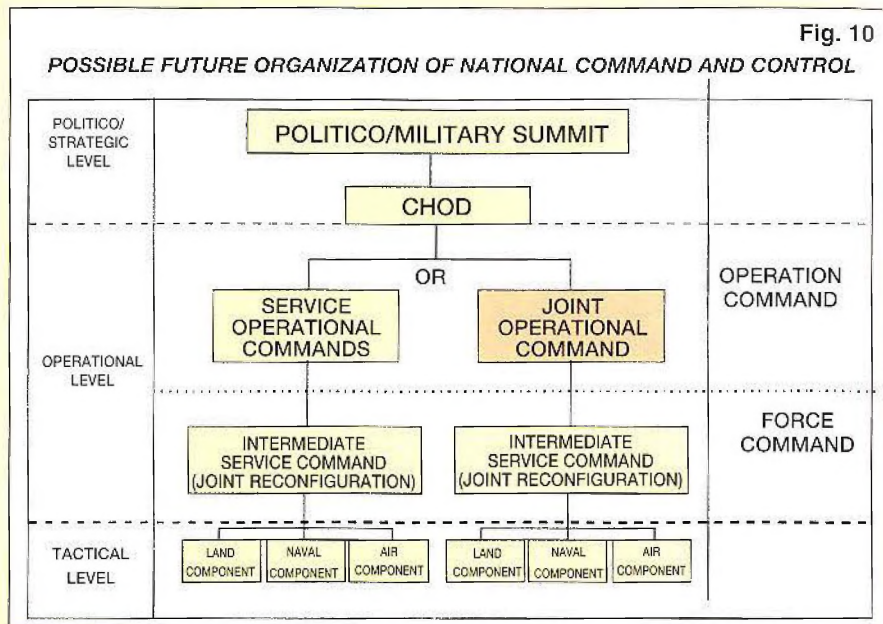
the FOP Deputy Commander, as 3rd Italian Division of the ARRC, or as Sector Command in a multinational context, not necessarily NATO. In both cases, COMFOTER takes on the role of Mounting Headquarters (11).

The Alpine Troop Command (COMTA) is in charge of all Alpine units and is potentially projectable, for employment as a replacement for COMFOP, in cases of operational cycles lasting more than 6 months.

The two **Defence Forces Commands** (1st and 2nd COMFOD), when in garrison are in charge also of some units of the projection and reaction packages, and, as a first priority, are destined to operations connected with presence and surveillance.

Finally, the **Support Command** is in charge all tactical and logistic supports of COMFOTER. It guarantees unity of direction in the preparation of the units as well as their coordination in case of employment. Among the most qualifying activities there is certainly the assumption of full responsibility for the "adherence logistics" (12), with particular reference to the engagements of Italian contingents outside the national territory.

Also the Command and Control structure of the logistic component of the Army, devoted to the support of the instrument, has been entirely redefined. The whole component is subordinate to the Logistic Inspectorate, which is in charge of two Area Commands (Logistic Area North and Logistic Area South). For the support of the forces projected outside the national territory, the Logistic Area South Command will take on a specific configuration, appropriate also for the



performance of the role of lead nation, for the management of the logistic activities in relation to the other nations.

National Command and Control in operations

The problem of Command and Control in operations can be examined only with reference to a joint context. As a consequence of the recent approval of the Law on the High Ranks, the Italian Armed forces will have at their disposal:

- Operational Joint Command (COI), capable of assuming the functions of Operation Command;
- Command of Forces of individual components, whose main task is to assemble and prepare the respective forces and, when necessary, to carry out the role of Component Command or Supporting Command.
- intermediate Commands of each Service, capable of carrying out the role of "Force Command", after a "joint" reconfiguration if necessary. In substance, for national operations the Chief of Staff of Defence, according to the

circumstances, could avail himself, as Commander of the Operations on National territory, of:

- the joint Operational Command, to be established in the near future;
- or the Army Operational Commands (for operations envisaging mainly the employment of a single component).

The Command of the in-Theatre Force would be ensured by an intermediate Army Command, that would become "Joint" to meet the particular requirement.

CONCLUSIONS

The picture outlined meant to touch upon the essential aspects of "Command and Control", underlining both its value for the operations and its complexity. Value and complexity emphasized by the contexts (joint and multinational) and scenarios (mainly remote) in which the modern operations take place. The available capabilities in the specific sector concur, in a decisive way, in the definition

of the role the Army can play in the national context and, above all, in the international milieu. Excellent capabilities in the various operational functions are of little or no avail if not completed by those relevant to Command and Control. In this perspective, it is necessary to foster an harmonious growth of all components required for the development of the functions. We refer first of all to personnel (Commanders and staffs) and to the automated systems, based on advanced technologies in the sectors of satellite communications, informatics, electronics etc. But, at the bottom of everything, there must be an updated doctrine, aimed, on the one hand, at the "Command style" and, on the other, at the working procedures within the staffs, harmonized with those employed within the operational context. This is the perspective in which one should read this article which, like the others, has the primary objective of activating a debate in order to gather the contributions of thought that qualify the doctrinal concepts developed within the Army.



** Brigadier General
Chief, Plans Office
Army General Staff*

NOTES

(1) Some doctrines, including the Anglo-Saxon one, mention only "Command", in that they consider "Control" one of its components.
(2) The British doctrine uses the expression "mission command".
(3) NATO envisages that, within the national sphere, and in absence of military operations, Commanders be attributed "Full Command", defined as the authority and responsibility of an



Officer to give orders to his subordinates. It covers all aspects, both in the operational and administrative field, and applies within the national context only. The term "command", when used in an international context, implies a lesser degree of authority compared to when it is used in the national sphere. As a consequence, a NATO Commander cannot hold full command over the forces assigned to him, since the Nations, in assigning their forces to NATO, concede operational command and control only.

(4) The expression is attributed to Field Marshal Montgomery.

(5) Art.5 of the North Atlantic Treaty describes the cases where NATO intervenes militarily.

(6) "Non-art. 5" operations are those conducted outside the NATO area.

(7) The UN also considers:

- operations "under UN mandate", where planning, organization and conduct of the operation are entrusted to another International Organization (as in Bosnia);
- operations "under UN aegis", where the Security Council invites the member Nations to

put into practice the most appropriate means in order to "compel" a Country to accept one of its resolutions (as in the Gulf War).

(8) The Nations which signed the MoU for the institution of the ARRC are: Belgium, Canada, Denmark, Germany, Greece, Holland, Italy, Portugal, Turkey, United Kingdom, United States.

(9) The expression "Command Framework Division" describes a Division Hq. whose basic framework (approx. 70%) is provided by a lead Nation taking upon itself also the responsibility of its operation.

(10) See articles of same series, published on no. 1/98 of "Rivista Militare", Italian edition.

(11) The expression "Mounting Headquarters" applies to a Command which, operating at its garrison, carries out staff and executive functions in favour of forces operating "out of area".

(12) The logistic organization of the Army, abandoned the concept of the "rings", is divided in two sectors: adherence logistics, typical of the units, and support logistics, under the authority of the Logistic Inspectorate.

The Army General Staff - as is the case with other Allied Armies - is undertaking specific studies aimed at defining the conceptual aspects of the problems relevant to the struggle for the control of information, both as regards "traditional" war operations and PSOs. The study is conducted also in the light of the lesson learned in recent years from the conduct of a number of "out-of-area" operations and from the experience gained from the long-standing participation in the activities of the allied Commands (ARRC, AMF-L, etc.). In this context, it should be stressed that there are different connotations between the struggle for the control of information in war operations - intended as a key-instrument for the protection of one's own information system and the reduction of the enemy's informative capabilities - and that conducted in PSOs, with particular reference to peacekeeping operations and humanitarian interventions, aimed at taking an informative advantage from the environment, in order to safeguard the physical safety of the formations, to know and understand the context of the intervention and, at the same time, to divulge - with the highest transparency and impartiality - information about the objectives and intentions of the intervention Force. Within this framework we can also include the reorganization of the Intelligence — Security component which, in the wider picture of the measures for the reconfiguration of the Service's architecture envisages:

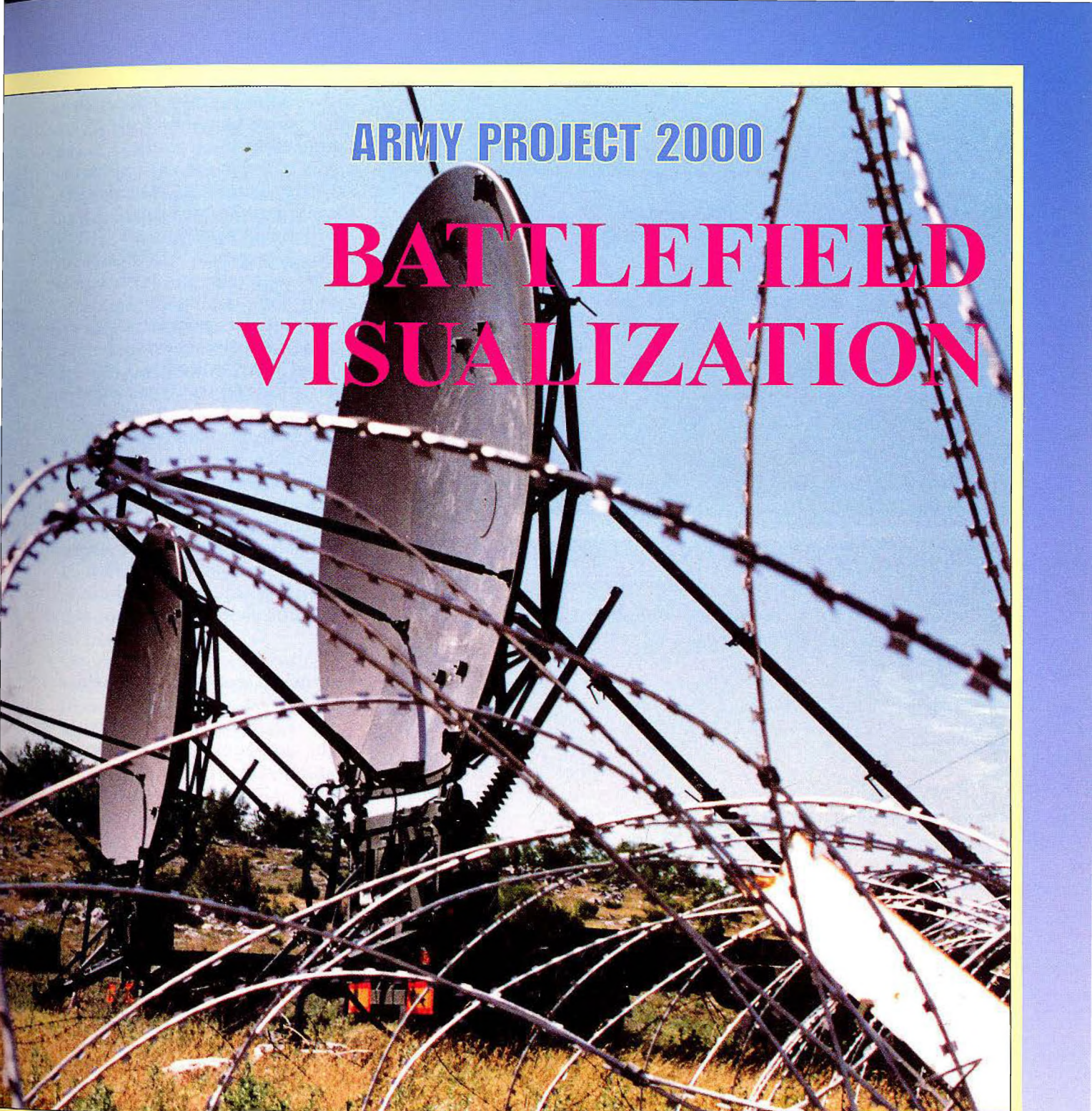
- at the highest level, the inclusion of the Security and MP office (formerly 2nd office of the II Division) in the Employment Division of the Army General Staff, as well as the establishment of an IEW Department under the Services Inspectorate, after the transformation of the pre-existent CIDEE, located at Anzio.
- at the operational level, the establishment of an IEW Group, subordinate to the Land Operation Forces Command.

From this viewpoint, the article by Lt. Col. Lunelli is a valuable contribution of thought on a subject of the greatest topical interest for all modern Armies, characterized by the increasing employment of resources and technologies to achieve the so-called "transparency" of the battlefield, through the struggle for the superiority in the intelligence field. The Author himself presents a vision of the problems deriving from the operational experience gained by the US Forces and by NATO which, beyond the specific characteristics relevant to the PSO operations mentioned above, is one of the references for the development of the subject in the national ambience.



by Pier Paolo Lunelli *

On the night of Tuesday, January 29, 1991, ten days after the start of the "Desert Storm" air campaign, Saddam Hussein

A photograph of a JSTARS radar system. In the foreground, there are several strands of barbed wire, some of which are out of focus. Behind the wire, a large, white, parabolic radar dish is mounted on a complex metal structure. The dish is pointed towards the sky. The background shows a clear blue sky and some dry, yellowish vegetation on the ground.

ARMY PROJECT 2000

BATTLEFIELD VISUALIZATION

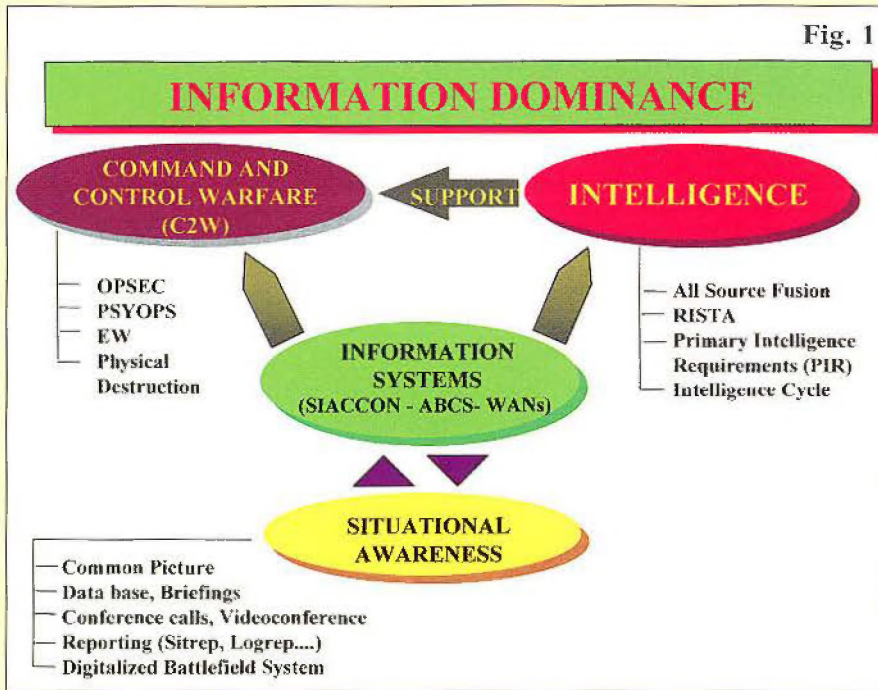
launched a land attack and conquered the city of Al Khafji (1) on the eastern coast of Saudi Arabia. The joint Surveillance Target Attack Radar System (JSTARS), an airborne system capable of giving the friendly and enemy situation in real time, was monitoring the operation,

noting that the penetration was conducted by a force of at least two Divisions. The Iraqi units, stopped by the land forces in contact - (US Marines and Saudi infantry), supported by hundreds of air sorties which disjuncted the second echelon - lost the capability of sustaining the battle and were pushed

back, while the city was reconquered the following day.

The employment of JSTARS answered a big question, i.e. how to monitor mobile objectives on the battlefield in real time, getting information on the intentions of the enemy. This information, combined with the use of air power, puts the

Fig. 1



Commander in front of two options: stop or manoeuvre. But in both cases, having lost initiative and surprise, the possibilities of being defeated increase anyway.

This work is centred on two themes:

- control of information on the battlefield, how to achieve and keep it;
- introduction on the Battlefield Visualization Concept (2) and its connections with the decision-making process.

INFORMATION DOMINANCE ON THE BATTLEFIELD AND "BATTLEFIELD VISUALIZATION CONCEPT".

Information Dominance on the battlefield, of which "Desert Storm" is a classic example, is a part of the so-called Battlefield Visualization Concept. Battlefield Visualization is a process through which the Commander:

- develops a clear awareness of the situation of the moment, in connection with the enemy and the environment;

- defines the desired "end state", (3) representing the accomplishment of his mission;
- visualizes the sequence of activities needed to take his forces from the existing situation to the "end state".

In substance, it can be affirmed that a Commander has control of the information when he controls his own situation, as well as the enemy's and the environment's, and in this context can perceive the "end state".

"Battlefield Visualization" has two essential aspects.

The first, as already said, concerns the awareness of the existing situation of the friendly and enemy forces. This awareness does not refer only to the understanding of the plans and/or orders issued by the Commander, the location of the friendly and enemy forces, the level of their operational effectiveness and to environmental factors, but also includes human factors, such as fatigue, morale and decision-making system of both forces.

The second aspect concerns instead the ability to see and digest the dynamic relation

between the opposing forces, in other words how the Commander can lead those forces by means of a sequence of activities connecting the present situation to the "end state". "Battlefield Visualization" includes therefore activities such as foreseeing the moves of the enemy and planning the appropriate countermeasures, besides time elements that suggest when to modify gravitations or priorities, when to reinforce or ask for reinforcements, when to break contact etc.

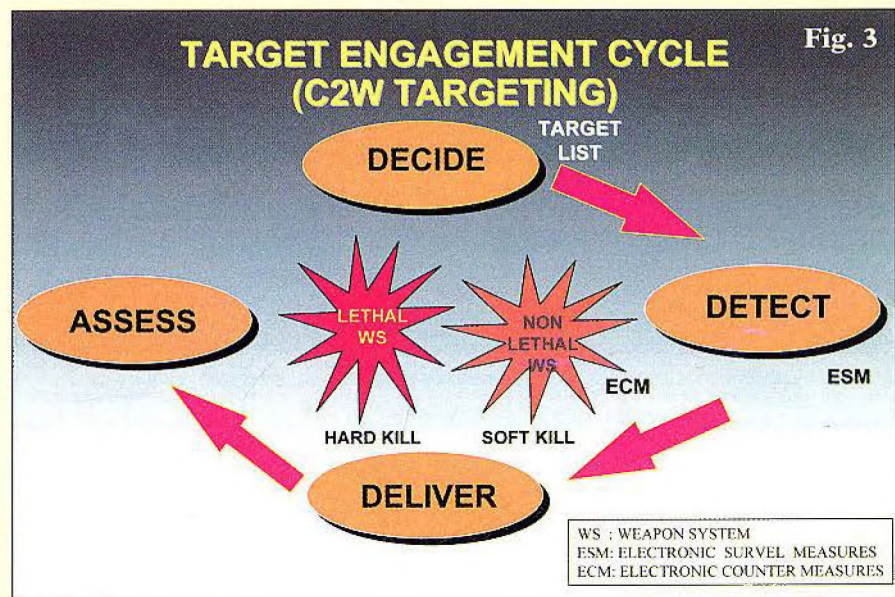
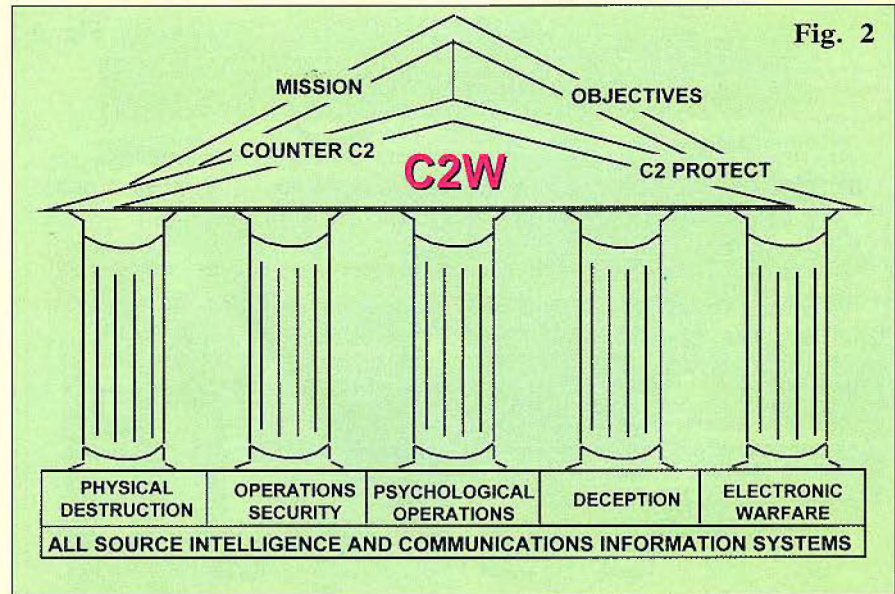
"Information Dominance" is based on four cornerstones: command and control warfare, intelligence, situation awareness and information systems. The logic relationship among the individual elements is shown at fig. 1.

Command and Control Warfare (C2W)

The capability of exercising Command and Control is the prerequisite for the success of a military operation. Sensors, technology in support of the decision-making process, data bases, information and communication systems are fundamental elements of a Command and Control system, while the orderly flow of information through the nets realizes the efficiency of the system. A Command and Control system includes personnel, equipment and procedures that move from - and go back to - knots. These knots are a critical elements of the system, because their destruction degrades the capability of exercising Command-Control and, therefore, of conducting military operations. For instance, the Airborne Warning and Control System (AWACS) and JSTARS respectively improve the capabilities of the air defence

and the surveillance of the enemy formations on the ground. On the other hand, they are critical knots to be safeguarded and protected. Command and Control Warfare (C2W) (4) consists in the integrated use of Operations Security (OPSEC), Military Deception, Psychological Operations (PSYOPS), Electronic Warfare (EW) and Physical Destruction, integrated and supported by intelligence, in order to (fig 2):

- prevent the enemy from acquiring information;
 - influence, degrade or destroy his capability to exercise Command and Control;
 - protect our capability of Command and Control from similar actions conducted by the enemy.
- In particular:
- Operations Security (OPSEC) aims at preventing the enemy from acquiring information;
 - Military Deception has the purpose of deceiving the enemy, manipulating and distorting the information in his possession.
 - Psychological Operations (PSYOPS) act on the human element, affecting the enemy's morale and willingness to fight. The media are to be considered means for the conduct of PSYOPS.
 - Electronic Warfare (EW) aims at degrading the efficiency of the enemy's radar and communication systems;
 - Physical Destruction is directed to the enemy's Command and Control critical knots, as Commands, communication centres, etc.;
 - the role of Intelligence, instead, is that of concurring to the detection of the aforesaid critical knots of the enemy Command and Control System and, at the same time, evaluating the effectiveness of the entire C2W activity.

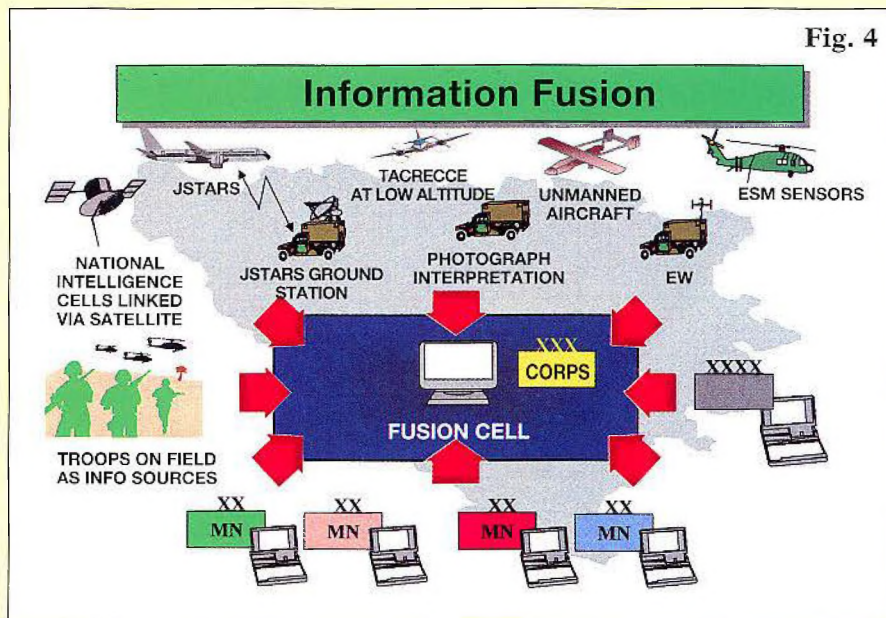


Gen. Schwarzkopf's operational concept in Operation "Desert Storm" is a classic example of what has just been said (5). The main effort was conducted by the VII Corps on the left flank, directly on Iraqi territory, in order to destroy the Republican Guard. The decision to move the Corps to its staging area was to be taken only after launching the air campaign, which had the purpose of attacking the command and control system (C2W and Physical Destruction), affecting the

morale (PSYOPS), conquering and keeping the air superiority, also through actions of electronic warfare (EW), as well as interdicting the enemy capability of conducting the intelligence activity meant to discover where and when the main effort would be exerted (OPSEC).

The definition "C2W" identifies two action areas and therefore two different planning processes. The first, offensive, is named Command and Control Warfare Targeting, and operates within the framework of the

Fig. 4

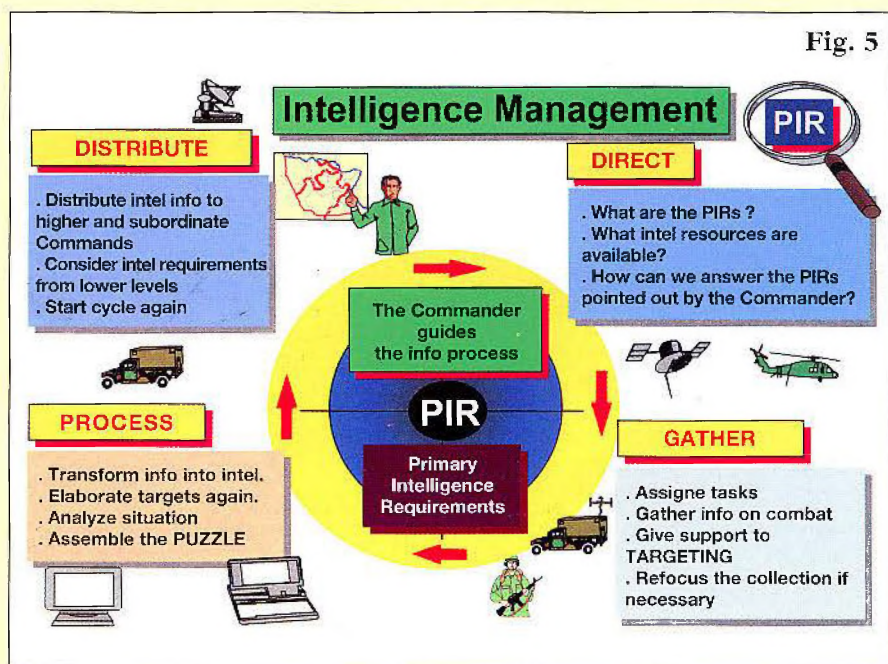


The second planning process is of a defensive nature, aims at identifying the critical knots in the friendly Command and Control System, analyzing its vulnerabilities and providing lines of action for their protection.

Intelligence

Intelligence is the second cornerstone of Information Dominance. It is a very valuable resource, that must be used by the Commander, who determines the priorities relevant to the so-called Primary Intelligence Requirements (PIR) (6) which, in their turn, guide the gathering operation. The intelligence activity must be coordinated at all command levels, and therefore all the agencies concerned are represented within an All Source Cell, i.e. a cell for the fusion of information. Fig. 4 shows, at Corps or Land-Component Commander level, the activity of fusion of the information originated by JSTARS and its ground station, TACRECCE and its unmanned aircraft, AIR RECCE, electronic warfare conducted through Electronic Surveillance Measures (ESM), higher and subordinate Commands, troops on the ground, National Intelligence Cells (NICs) connected via satellite etc.

Fig. 5



Target Engagement Cycle. It aims at (fig.3):

- determining the objectives to attack, in accordance with the Commander's operational concept (DECIDE);
- identifying the critical knots in the enemy Command and Control system (DETECT);
- analyzing their vulnerability and importance from the perspective of Command and Control;
- drawing the priority target list;
- determining the effects desired on each knot;
- hitting the critical knots (DELIVER) with non-lethal means (soft kill) as, for example, Suppression Enemy Air Defence (SEAD), Electronic Counter Measures (ECM), or with lethal means (hard kill);
- assessing the effects of the action on the whole operation (ASSESS);
- resuming the cycle.

It must be stressed that a single event could be reported by different sources at different times, according to the number of passages along the Command and Control Chain and the reporting system (real time, periodic, casual).

Before JSTARS, the fusion of information often gave muddled results. The sources shown at fig. 4, in fact, suffer from one or more of the following limitations: night conditions and poor visibility sensibly

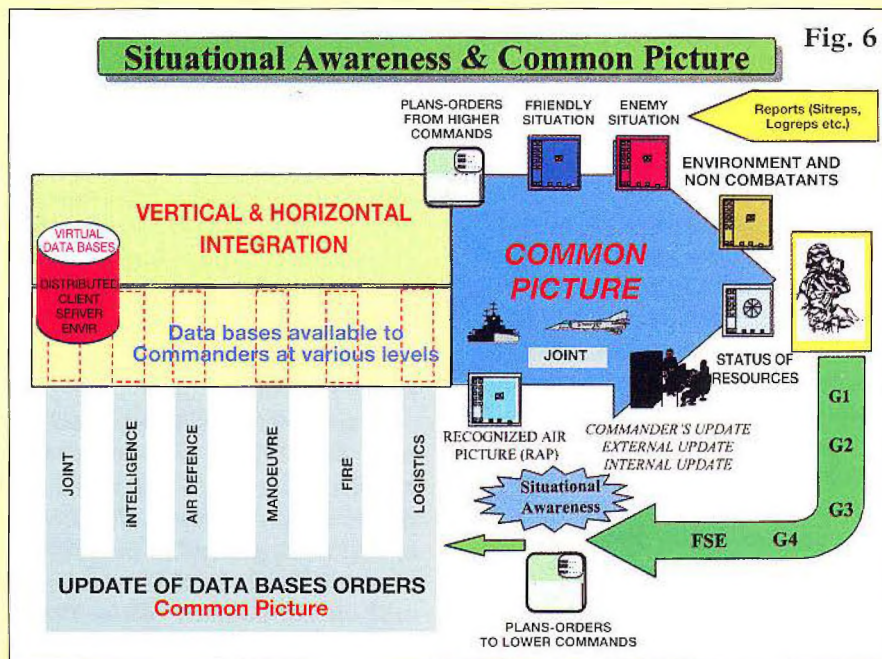
degrade the effectiveness of most systems; none of them is capable of perceiving mobile objectives on large areas in the range of 300 by 300 km; the analysis of the information requires hours and, in some cases, even days.

The employment of JSTARS has therefore remarkably improved the capability of conducting the so-called Reconnaissance, Intelligence, Surveillance and Target Acquisition (RISTA) (7) whose components are:

- Area Surveillance, to gather information on the potential enemy;
- Reconnaissance in Depth, giving information on areas that cannot be covered by direct fire;
- Combat Reconnaissance, for the information requirements of the units in contact with the enemy.
- Target Acquisition, meant as the process giving information on the position of the enemy forces, with such an accuracy as to permit its neutralization or destruction through the employment of a process similar to the one already shown at fig. 3.

The coordinated employment of the Intelligence resources, JSTARS included, therefore gives the Commander the possibility of visualizing in real time the movements of the friendly and enemy forces, even in conditions of poor visibility.

As far as the information process is concerned, it goes according to the cycle shown at fig. 5. The Commander determines his Primary Intelligence Requirements (PIR), the staff (8) determines the assets most suitable for the job. In their turn, they have the task of gathering the necessary data. They are processed, transformed into Intelligence and then distributed to all users.



Situational Awareness and relations with the decision-making process

Situational Awareness is the third cornerstone of the so-called Information Dominance. It gives the Commander the answers on the location of friendly and enemy forces, their activities, their status, their capability of fulfilling the assigned mission, the situation of supplies, etc.

A clear Situation Awareness (fig. 6) allows the Commander to have a picture of the situation of the "real time" type (9), i.e. almost in real time. This general picture derives from the so-called "common picture", which is the result of information in several data bases, shared through the integration, both vertical (among the different command levels, also in a joint setting) and horizontal (within a Command and among agencies of the same level, even if they are joint ones).

It is important to underline that the aforesaid data bases are an integral part of six operational systems: Joint, Intelligence, Air Defence, Manoeuvre, Fire and

Logistics, as shown in the example at fig.6.

The common picture includes information coming from plans and/or orders received from the higher command, informations from the lower commands, reports on the friendly and enemy situation, the environment, the non-combatant elements (as refugees, prisoners of war, non-military organizations), status of resources, Recognized Ground and Air Picture (11) and so on. These situation elements, processed by the staff (G1 - G2 - G3 - G4 - Fire support Element FSE), lead to the staff estimates, then to the Situation Awareness by the Commander and produce decisions, orders and actions which intervene in the modification of the various joint data bases, intelligence, air defence, manoeuvre, fire and logistics, putting them at disposal of the Commanders at the various levels. The common picture that, as we have already said, aims at visualizing the existing situation, is realized through other instruments, such as the

use of written reports (SITREP, INTELREP, LOGREP etc.), morning and evening meetings (Update Conference Calls), which are made easy through the employment of presentations of the "Power-Point" type during the video-conferences or phone connections among Commanders. Furthermore, there are meetings of working groups as the Command Group, Joint Targeting Group, Corps Planning Team, Crisis Management Team, Media Perception Team, Joint Air Defence Group, etc.

Situation Awareness and Common Picture are an integral part of the decision-making process, whose model is shown at fig.7.

This model, based on the assumption that Blue and Green develop a similar decision-

INFORMATION DOMINANCE IN BOSNIA-HERZEGOVINA

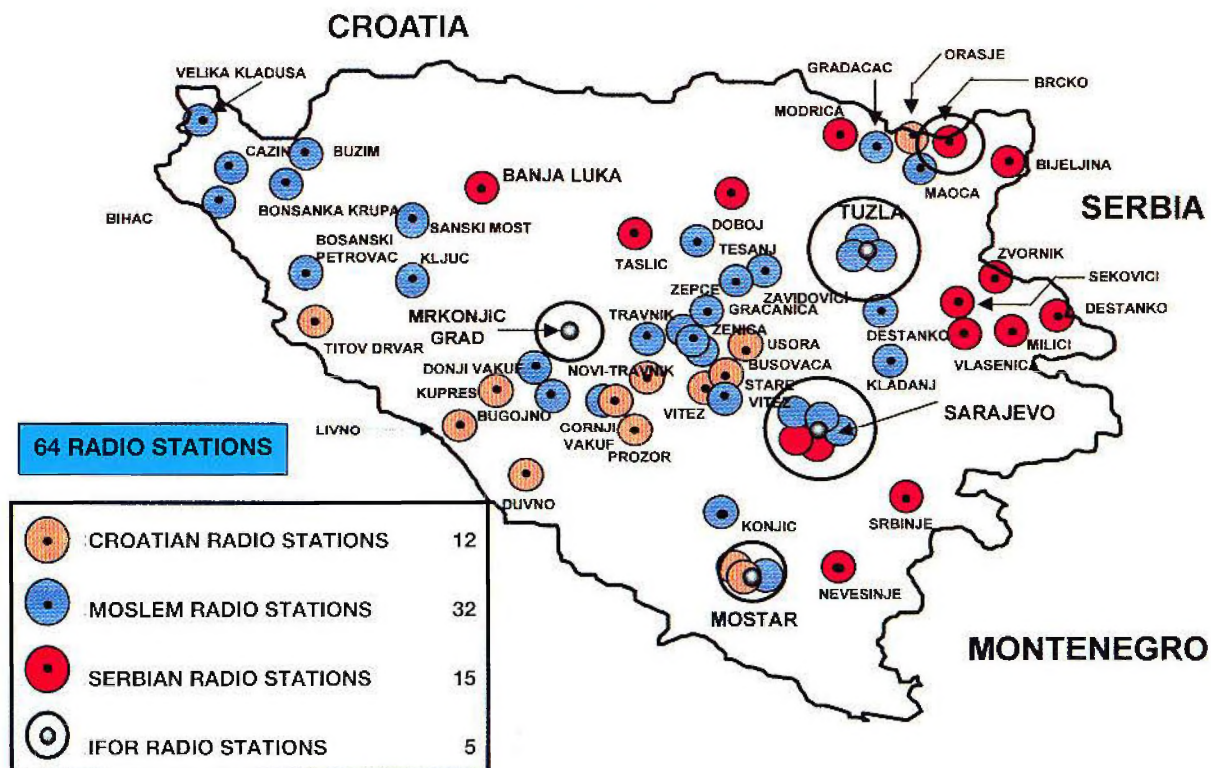
In operation "Joint Endeavour", non-lethal weapon systems, as SEAD, PSYOPS and media, were amply used. The multinational force, in fact, has never employed lethal weapon systems, although it had the capability to use them. The "Former Warring Factions" (FWF) were astonished at the quality and quantity of information available at coalition level.

This information was often utilized in order to prevent hostile acts and force the opponents to stay within the tracks of the peace process.

In the sector of Command and Control Warfare (C2W) the aim was to obtain the cooperation of the conflicting parties, encouraging their potential of exercising command and control, rather than destroy it. The management of the media, which is part of PSYOPS, proved to be a force multiplier rather than a distracting element. Radio and TV stations broadcast information on minefield and on the content of the Peace Treaty, while a weekly distributed free of charge informed the population on the progress achieved (fig.A and B). On the other hand, the fact that many TV and newspaper reporters asked for information directly of the soldiers of the peace force and others had access to some command areas, was a risk for the "Operations Security" (OPSEC). The Intelligence activity, due to the multinational character of the operation, required a remarkable effort in order to realize an information

RADIO STATIONS IN BOSNIA-HERZEGOVINA

Fig. A



network capable of sharing out the information often gathered with non-interoperable systems.

Besides, information on the activities of the opposing parties have been collected using various resources such as forces on the field, Intelligence assets, reconnaissance on the separation zone, carried out with airplanes and helicopters, manoeuvre forces, AWACS and JSTARS, PSYOPS, civil affairs, International Police Task Force, Special Forces and Joint Military Commissions (JMCs).

As for the Situational Awareness, this did not concern the Implementation Force (IFOR) alone, but also the Former Warring Factions. The use of formatted reports on the situation, plans, orders, briefings, video-conferences, morning and evening briefings, has made possible to bring up to date, almost in real time, the Commanders at all levels. Not to be overlooked is the employment of many interpreters, who made possible the compilation of a map showing tens of thousands of minefields all over Bosnia-Herzegovina.

Finally, the sector of information systems has proved a great success. The NATO information system, named CRONOS and consisting of "Wide Area Networks" (WANs) connected with numerous "Local Area Networks" (LANs) has made possible the rapid, efficient and safe passage of information through an electronic-mail service based on Microsoft technology.

Thousands of users had the possibility of exchanging data, information, documents, data base and images, achieving a real horizontal and vertical integration of the information system.

making process, can be explained as follows:

- the Commander, pivotal element of the Command and Control process, observes the environment (through sensors, information systems and reports from subordinate Commanders) in order to gather data on the situation of friendly and enemy forces. These data are correlated, fused and represented in the so-called Common Picture, which gives an image of the battle, shared at all command levels. The information process here plays a primary role on the orientation capability of the decision-maker;
- the Commander orients himself through a cognitive process, giving form to a mental image of the existing situation, transforming data and information, into

DISTRIBUTION OF THE "HERALD OF PEACE"

Fig. B

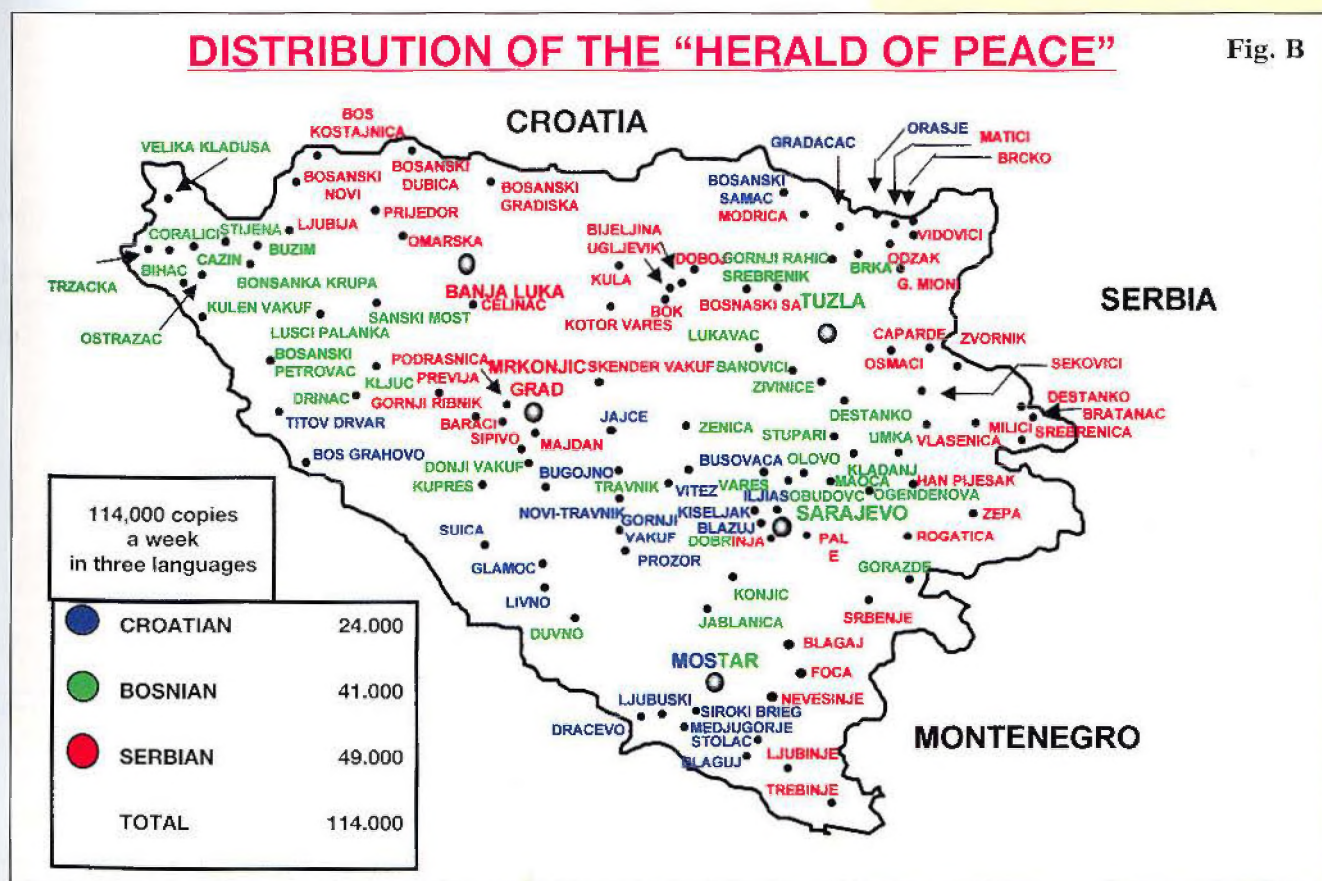
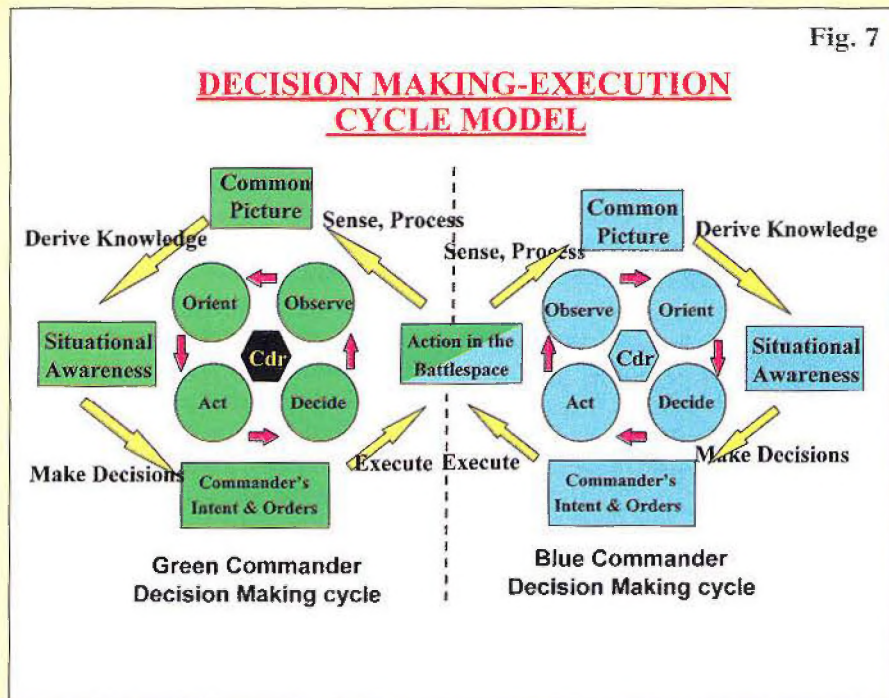


Fig. 7



evaluations, deductions and assumptions. At the end of the orientation phase, he realizes the awareness of the battle space, i.e. the "situational awareness". This phase is the keystone of the decision-making process, in that it influences the modalities by which he observes, decides and acts;

- the Commander then decides his line of action and expresses his intentions, which are transformed into plans and/or orders by the staff;
- finally, in the "Act" phase, the Commander interacts with the enemy's decision-making process, monitors the execution of the action on the battlefield, observes the results, and the cycle resumes.

The model just expounded suggests the following considerations:

- the decision-making cycle is a continuous process, where all phases are present at all command levels. Each Commander, in fact, gathers information, develops the situational awareness and plans

the future actions while conducting the operation;

- Commanders at all levels must clearly understand the intentions and orders of their Commander, in order to avoid frictions and unwittingly "row against the current". The "back brief" is an instrument that permits each Commander to verify whether his subordinates have well understood his orders.
- although the decision-making cycles of both the Blue and Green Commanders share the same space/time, they are not synchronized for obvious reasons;
- the capability of imparting rhythm to the operations has three components: rapidity of decisions, rapidity of execution, rapidity of the forces when moving from an activity to the next. This capability is a success factor, in the sense that a greater rapidity of the Information-Decision-Action in the Blue camp creates confusion in the Green camp, slowing down their decision-making capability and leading them to

defeat. Liddel Hart made this comment on the German invasion of France in 1940"... the action conducted by the German armoured units paralyzed the French Staffs... to the point that the orders were issued when they were already surpassed by the situation, often with a delay of more than 24 hours... This created panic, led to paralysis and loss of the capability to resist..."

The computerization of the battlefield will reduce the gap between the "near real time" and the "real time" picture. At present, the latter is operational only in the sector of air defence. A tank battalion Commander, for instance, will have at his disposal, in real time, the situation of ammunition and POL of each of his combat vehicles and, at the same time, follow their movement through obstacles and minefields on a video terminal.

Information Systems

The Information Systems, fourth cornerstone of Information Dominance, represent the nervous system that interconnects Command and Control Warfare, Intelligence and Situational Awareness, as already illustrated in fig.1. They permit to put the coordination into practice almost in real time on the whole area of the operations, and to expand it virtually also outside it. The information-technology era remarkably improves the power to visualize, anticipate and deal promptly and correctly with the new situations. In particular, the employment of systems such as Wide Area Networks (WANs) and Local Area Networks (LANs), associated with a specific software, positively affects the following activities:

- force deployment. A software named ADAM (Allied

GLOSSARY

BATTLEFIELD VISUALIZATION CONCEPT

The "battlefield visualization concept, describes the way in which the command activity should be conducted, not only in war operations, but also in those in support of peace. According to this concept, the Commander, who anyway keeps a prominent role, employs information systems in order to improve his situational awareness of what takes place on the battlefield, to reduce the margins of uncertainty and risk, and finally to rapidly transmit his intentions and his orders. The level of its applications, albeit specifically referred to the Brigade or higher level, reaches all command levels. "Information Dominance" is an integral part of this concept.

END STATE

The "end state" is defined as the state or the situation that must be reached in order to consider the conflict ended or solved. Examples of end states at operational level are: the liberation of Kuwait in operation "Desert Storm"; the creation of a favourable environment, where the UN and the non-governmental organizations can assume full responsibility for the conduct of humanitarian operations as in operation "Restore Hope" in Somalia; the achievement - within 12 months - of the end of hostilities, the withdrawal of all forces, including those belonging to foreign Nations, from the separation zone, in operation "Joint Endeavour" in Bosnia Herzegovina.

JSTARS (Joint Surveillance Target Acquisition Radar System)

It is an airborne system for the surveillance of mobile objectives at low speed (tanks, vehicles, helicopters). It includes two complementary elements: an airborne system (Airborne Radar System) on a Boeing 707 platform, and a ground station (Ground Station Module). The radar information and messages between the two elements are transmitted via data link using the Joint Tactical Information Distribution System (JTIDS) which inserts them in the Command and Control System of the air forces, employed, among others, also by AWACS. Both the land and the air Commanders, as well as the operation Commander, can monitor stationary and mobile objectives, facilitating the targeting activities (see below) and the management of the battlefield.

LEAD NATION

"Lead Nation" is a Nation which assumes the responsibility of giving logistic support to multinational forces.

PIR (Primary Intelligence Requirement).

PIRs are the enemy portions of the "Commander's Critical Information Requirements" (CCIR). Through them, the Commander defines: what he wants to know (intelligence required), why, within what time, and finally how (type of format and method for obtaining it). Although the definition is close to the "Essential Intelligence Requirements" concept, the latter lacks the priority element.

RAP (Recognized Air Picture) and RGP (Recognized Ground Picture).

RAP is the result of the fusion of information coming from various radar platforms (on land or airborne). For example, on a Division or Brigade-level videoterminal it is possible to see the air situation in real time, with clear indications on friendly aircraft (who they are, where they are, what they are doing).

RGP gives the same information on mobile objectives belonging to the friendly and enemy forces. It is possible, for instance, to see a tank column in movement or a convoy of supplies. Only JSTARS has this capability on areas 300 x 300 km in size. In the immediate future, the "Recognized Air Ground Picture" will come into being, i.e. the integration between RAP and RGP. The advent of RASP (Recognized Air Ground Picture) will allow the land and air Commanders to see, in real time, the situation of each other.

ROLE SPECIALIZATION

The term "Role Specialization" applies when a Nation assumes the responsibility of giving logistic support to multinational forces in a specific sector, for example medical support at Role 3 level.

SITUATION REAL TIME and NEAR REAL TIME

A "real-time" situation derives from the availability of data in real time. Examples are the Recognized Air Picture provided by ground and airborne radars (AWACS) and the Recognized Ground Picture provided by systems of the JSTARS type. A "near-real-time" situation, instead, derives from the fusion of data coming from different sources, as reports (SITREPs, INTELREPs, LOGREPs...), air photographs, etc. This fusion process requires a certain time, and therefore produces a "near-real-time" situation.

TARGETING

It is a process through which the enemy objectives are selected, and the best system is chosen for their neutralization or destruction. It concerns mainly three aspects:

- selection of enemy objectives, depending on their importance, only in view of the assigned mission;
- selection of the most suitable system to find and attack them, not only with lethal means, but also with non-lethal ones, as for example SEAD (Suppression Enemy Air Defence), Information Campaign, etc.;
- result to achieve, in terms of destruction, delay in the enemy action, or limitations in his freedom of action.

To understand the criteria for the selection of the enemy objectives, let's consider the following example. The enemy assets in Engineer-corps pontooners are certainly an objective of high intrinsic value when the enemy's concept of action envisages the crossing of a watercourse. But if in our operational concept we envisage to let the enemy cross the river, in order to counterattack during a critical phase of his action, then in this case the enemy Engineer unit is not a paying target, although it maintains its high intrinsic value.

GPS (Global Positioning System)

It consists of:

- a system of 20 geostationary satellites covering all the earth's surface;
- a ground installation capable of receiving data from at least three satellites and determining the coordinates of the control station with an approximation of 5 to 100 - 300 metres.

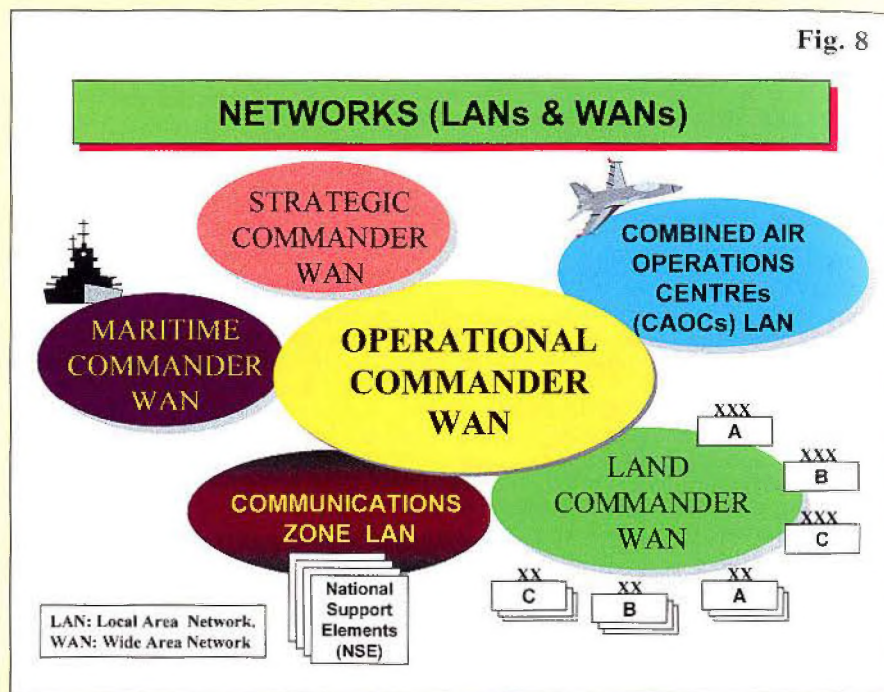
NATIONAL SUPPORT ELEMENT

Elements tasked with the support of a force deployed in a theatre different from their motherland. They normally operate at the "Sea Ports of Disembarkation" (SEAPODs) and/or the "Air Ports of Disembarkation" (APODs).

Deployment and Movement System) is already available and can produce the itinerary for materials - be they tanks or tents - and for personnel - By pressing a button it permits to print a document such as: "send radar 111 from Battalion X to Brigade Y by rail on D+5, from Milan to Naples, to be shipped on ship Z, which after two days of navigation will arrive at port W on D+8". Moreover the location of the containers equipped with a Global Positioning System (GPS) can be constantly monitored with an error of 5 metres;

- logistics, in that it achieves a cost-effective use of scarce resources, permitting to promptly detect and meet the requirements of the battlefield. Considerable savings can be made by implementing the Lead Nation (12) and Role Specialization (13) principles, even if this sometimes entails a reduction of the national authority in the logistic field;
- conduct of the operations, in that it permits the immediate updating of the situation, the prompt delivery of reports, the availability at the concerned levels of the Recognised Air Picture and Recognised Ground Picture, the planning and monitoring of air operations, and so on.

Fig. 8 illustrates an information system similar to Internet, which interconnects the Strategic, Operational and Tactical Commanders in their land, air and maritime components, the Communications Zone and the National Support Elements, which operate in Sea Ports of Disembarkation (SEAPODs) and in Air Ports of Disembarkation (APODs). The reverse of the medal is that the proliferation of



information systems is associated with a similar increase in the need for transmission systems and frequencies.

The requirements of the modern battlefield impose the realization of high-security, satellite-linked information networks, the adoption of C4 Systems and relevant LANs, (redeployable and possibly without connection wires), the removal of bottlenecks (14) and the availability of adequate measures of protection from computer viruses (15). Moreover the staff should use the same software also for garrison activities, in order to facilitate their employment in operations. Ideally, the personnel employed in a Theatre should arrive on the spot, plug in and obtain the immediate connection with the desired users.

Fig. 9 illustrates both the framework and the functions of an information system for the management of land operations.

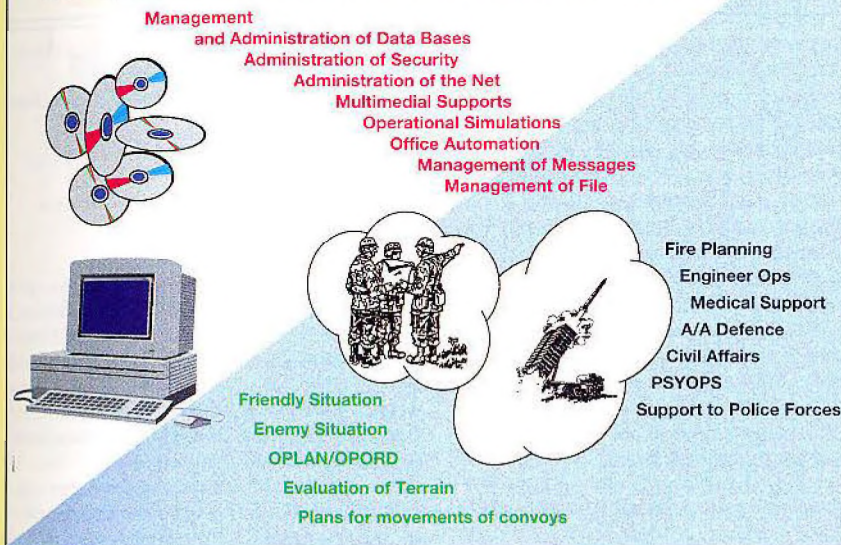
Each nation has developed its own Information and Command

and Control systems, which, nevertheless, have scarce interoperability not only at interservice national level but also at multinational level. Among the better known air-land systems, we can enumerate:

- for the planning and monitoring of the employment of the air forces there are two main systems: the Contingency Theatre Air Planning System (CTAPS) and the Interim Combined-Air-Operation-Centre Capability (ICC). While the former is adopted by the United States, the latter is being implemented in all NATO European Countries;
- for the land Forces Command and Control each country has its own information system. The road followed by the US is the Army Battle Command System (ABCS), which has a certain interservice interoperability, while the United Kingdom has chosen the Integrated ARCC Information System (IARRCISS) used at the

Fig. 9

Architecture of an Information System for Land Forces



Command of ACE Rapid Reaction Corps (ARRC). The Italian way, already known, is the Command and Control Automated Information System (Sistema Informativo Automatizzato Comando e Controllo - SIACCON) whose functions are outlined at fig. 9. For the management of the land anti-aircraft and air space systems of the Corps we can mention the Italian SOATCC, the Air Defence Command Information System (ADCIS) assigned to ARRC, and many more;

- for the conduct of interservice Command and Control, NATO has at its disposal a system called CRONOS which can easily realize the connections shown at fig. 7; finally, in the field of integrated air defence, a system already well known is the NATO Integrated Air Defence System (NATINADS).

Herzegovina mission, the last example of a long series of crises which turned into open warfare, emphasizes the necessity to possess Intelligence, Information, and Command and Control Systems with the connected telecommunication means. Without these key - elements the ability to efficiently manage the crisis fails, together with the possibility to deploy the necessary forces early enough to prevent dangerous escalations. Within this framework, to have information dominance in the areas at risk already in peacetime, and the ability to maintain it in case of employment of force is an important element at the decision makers' disposal.

□
*Lieutenant Colonel
Chief, Air Defence Section,
ARRC.

CONCLUSIONS

The slogan "Vigilance is the price of freedom" is still well-grounded. The Bosnia-

NOTES

(1) Gen. Schwarzkopf, "It does not take a hero", Bantam Books, p.526; Gen. Merrill Mc Peak, Chief

of Staff of the Air Forces during operation "Desert Storm", various articles.

(2) Battlefield Visualization concept, TRADOC Pam 525 - 70.

(3) "End State", see Glossary

(4) JCS MOP, March 30, 1993

(5) Gen. Schwarzkopf, "It does not take a hero", Bantam Books, p. 473.

(6) The "Primary Intelligence Requirements" (PIRs) are the enemy portion of the "Commander's Critical Information Requirements (CCIR).

(7) ATP 35, pp. 2 - 23.

(8) The term "staff" indicates the group of officers chiefly responsible for the internal operations of a Command.

(9) A "real-time" situation depends on the availability of data in real time. For further information, see Glossary.

(10) The presence of elements not engaged in hostile activities, called "non combatants", and their activity, can affect the decision-making process.

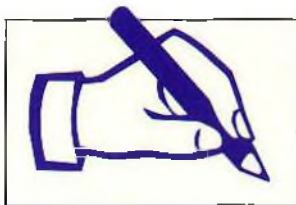
(11) The "Recognized Air Picture", usually called RAP, is the result of the fusion of information coming from different radar platforms, both on land and airborne. For further information see Glossary.

(12) "Lead Nation" is a Nation which takes upon itself the responsibility of giving logistic support to multinational forces.

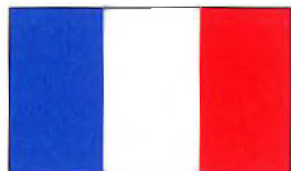
(13) The term "Role Specialization" applies when a Nation takes upon itself the responsibility of giving logistic support to multinational forces in a specific field, for instance in the medical sector at "Role 3" level.

(14) "Bottlenecks", in an information system, are obstructions on the electronic highways, generating queues and therefore delays in the transmission of information.

(15) In the distributed computerized systems, the transmission of viruses is facilitated by the connection into networks. The introduction of a virus in one of the terminals can infect the entire net in a short time and, sometimes, makes the system unserviceable for hours. The availability of up-to-date anti-virus systems is therefore indispensable.



SOMMAIRE INHALT RESUMEN



Équilibres stratégiques. Risques de destabilisation,

par Luigi Semprini (p. 2).

À cause de la fin de la « guerre froide » beaucoup de Pays de l'Afrique du Nord, du Moyen Orient et de l'Asie Centrale ont commencé une course aux armements, visée essentiellement à l'acquisition d'armes de destruction de masse, lesquelles utilisent des moteurs-fusées aériens, missilistiques et d'artillerie. Tout ça devient pour l'Europe et pour son côté Sud un ultérieur motif de préoccupation.

Le Subcontinent indien. Un géant aux pieds d'argile,

par Ornella Rota (p. 16).

Dans cet article on est présenté un tableau politique et stratégique du Subcontinent indien avec ses grands états, ses déconcertants problèmes et ses énormes potentialités culturelles et de développement industriel et technologique. La femme Auteur fait suivre une détaillée analyse des conflits intérieurs (Inde et Pakistan, retenues être en possession non déclaré d'armes nucléaires, se sont affrontées indirectement en toutes les guerres locales, de la Birmanie au Népal, de l'Afghanistan à Ceylon).

Les activités militaires dans les opérations internationales,

par Giovanni Manione (p. 22).

En mettant en évidence l'inéluctabilité de la coopération internationale dans la réalisation de « Peace Support Operations », l'Auteur décrit les caractéristiques et le type de préparation qu'on exige aux Officiers qui opèrent dans les sièges des Divisions Multinationals: préparation professionnelle; connaissance des langues étrangères, de la doctrine et des procédures de l'OTAN; « expertise » informatique; connaissance complète de l'ambiant.

Hollande. La nouvelle Armée de Terre. Interview avec le Général

Maarten Schouten,
par Enrico Magnani (p. 28).

L'article décrit les difficiles étapes que l'Armée de Terre royale hollandaise est en train de parcourir pour passer à un système fondé sur le volontariat. La réalisation du programme, qui se conclurera avant la fin du siècle, a consenti une réduction du 40% du personnel par rapport au 1990, avec une diminution du 25% du bilan en termes réels. De 1994 on a interrompu l'immission des soldats, en pouvant compter sur le recrutement des volontaires à l'intérieur d'un grand bassin d'utilisateurs que la société hollandaise met en disposition de la Force Armée, aussi pour les bonnes opportunités de travail qu'elle offre aux jeunes à la fin de leur service.

Portugal. La nouvelle Armée de Terre. Rencontre avec le Chef d'État-Major de l'Armée de Terre lusitanienne,

par Enrico Magnani (p. 36).

Chez l'Armée de Terre portugaise on est en train de réaliser un articulé processus de rationalisation pour créer un instrument agile et moderne à même de satisfaire les exigences de défense du territoire nationale et de s'intégrer opportunément dans des contingents internationaux pour les opérations de support à la paix. D'ici six ans la Force Armée sera composée essentiellement de volontaires avec une forte composante féminin. La restructuration en cours ne présente pas de problèmes d'instruction pour les Cadres, l'expérience desquels dans les missions africaines et balcaniques, offre de sûres garanties de professionnalisme.

Armée de Terre. «Projet 2000». Les lignes guide du changement,

par Ivan Felice Resce (p. 44).

L'Armée de Terre a entrepris le chemin de la modernisation. Les éléments fondamentales de cette nouvelle architecture sont: le Commandement et Contrôle; la composant opérationnelle; la composant logistique; l'organisation des Écoles et de l'instruction militaire. Le Commandement et Contrôle s'exerce à travers l'analyse de la situation, la préparation des plans opérationnels, la mise en activité des procédures de validation. La composant opérationnelle a la tâche d'assurer une présence qualifiée de l'instrument sur le territoire

et sa projection dans les zones de crises. La composant logistique, opportunément reconfigurée, est tendue à acquérir sveltesse, flexibilité et capacité de remplir des tâches de « soutien » et d'« adhérence ». L'organisation des Écoles militaires a été appelée à promouvoir un ininterrompu processus de requalification professionnelle du personnel pour le développement de tâches diversifiées, aussi dans les limites multinationales.

Armée de Terre. «Projet 2000». Paquets de capacités opérationnelles,

par Domenico Villani (p. 52).
Dans le cadre de la nouvelle conception opérationnelle de l'Armée de Terre italienne et de la corrélatrice structure de Commandement et Contrôle, avec la complète révision des organisations opérationnelle, logistique, de l'instruction militaire et du territoire, la configuration des « paquets de capacités opérationnelles » prend un rôle essentiel. Chaque « paquet », entendu comme un ensemble de capacités opérationnelles particulières harmoniquement unies, est étudié par remplir une mission déterminée.

Le Commandement et Contrôle dans les opérations militaires,

par Ivan Felice Resce (p. 64).

Le Commandement et Contrôle constitue le tissu connectif de chaque groupe de forces selon l'idée de « task organization ». Une fonction complexe et sophistiquée que l'Auteur décrit à travers la présentation d'un modèle théorique que se réfère à une opération imprécise. Après ça, il approfondit les éléments conceptuels que se fondent sur des événements concrets.

Visualisation du champ de bataille,

par Pier Paolo Lunelli (p. 78).

La maîtrise de l'information sur le champ de bataille (l'opération « Desert Storm » en constitue l'exemple classique) fait partie du « Battlefield visualization concept »; un processus à travers lequel le Commandant développe la connaissance de la situation rapportée à l'ennemi et à l'ambiant, découvre l'« end state » que représente le remplissage de la mission et visualise la suite des activités par conduire ses propres forces de la situation présente jusqu'à la dernière.

SOMMAIRE INHALT RESUMEN



Strategische Gleichgewichte. Destabilisierungsrisiken, von Luigi Semprini (s. 2).

Mit dem Ende des kalten Krieges haben verschiedene Laender in Nord Afrika, im Nahen Osten und im Zentralasien ein Wettrennen gestartet, mit dem Ziel Massenvernichtungswaffen zu erwerben, die auf Flugzeugen, Raketenraeagern oder mit Artilleriegeschuetzen benutzt werden koennen.

Diese Lage ist in der Tat fuer Europa und seine Suedflanke besorgniserregend: Aufgabe der Politik ist es angemessene Massnahmen zu ergreifen um ein positives Dialog zu starten, waehrend der NATO die Abwehrmassnahmen hinsichtlich der Luftverteidigung und balistischen Raketen obliegen

Der Indische subkontinent. Ein Koloß auf toernernen Fueßen, von Ornella Rota (s. 16).

Die Autorin berichtet ueber die politisch-strategische Lage des indischen aus groeßen Staaten bestehenden Kontinentes mit seinen gewaltigen Problemen, seinen ungeheuren kulturellen Moeglichkeiten, seinen industriellen und technologischen Leistungsfaeigkeiten. Danach unterzieht die Autorin die inneren Konflikte einer sorgfaeltigen Analyse (Indien und Pakistan, beide vermutlich in Besitz von Nuklearwaffen, standen sich schon mehrmals auf indirekte Art und Weise anlaetlich lokaler Konflikte gegenueber, wie z.B. in Birmanien, Nepal, Afghanistan und Sri Lanka) und beschreibt dabei die ungeloesen Widersprueche, die die soziale Ordnung der gesamten Region charakterisieren.

Aktivitaeten anlassesslich internationaleroperationen, von Giovanni Manione (s. 22).

Zugegeben dass, die internationale Zusammenarbeit im Rahmen von »Peace support operation« (Friedensunterstuetzungsmassnahmen) unvermeidbar ist, werden hier sowohl die Eigenschaften als auch die

notwendige Ausbildung fuer diejenigen Offiziere geschrieben, die innerhalb einem multinationalen Kommando eingesetzt werden: diese sind, die notwendigen Fachausbildung, eine ausreichenden Kenntniss von Fremdsprachen, NATO Doktrin und Verfahren sowie die gewuenschte Expertise in Datenverarbeitungsverfahren und eine gruendliche Kenntniss der Umwelt. Ausserdem muss man hier unterstreichen dass, angesichts der wachsenden Bedeutung hinsichtlich der Teilnahme an internationalen Operationen, die Bemuehungen des italienischen Heeres daran gerichtet werden sollten nicht nur eine bestimmte Anzahl von Offizieren fuer solche Aufgaben auszubilden, sondern sollten sie vielmehr die im NATO gueltigen Verfahren und Technologien anwenden.

Niederland. Die neuen Landstreitkraefte.

Interview mit Gen. Maarten Schouten (Oberbefehlshaber des Heeres), von Enrico Magnani (s. 28)

In diesem Artikel werden die schwierigen Uebergangsstufen des niederlaendischen, koeniglichen Heeres von einem Wehrpflichtigen- in ein Freiwilligensystem beschrieben. Verglichen mit 1990 hat die Programmdurchfuehrung, die binnen dem Jahr 2000 abgeschlossen werden wird, einen Personalabbau von 40% und eine greifbare Verringerung des Haushalts von 25% mit sich gebracht. Seit 1994 ist die Wehrpflicht aufgehoben worden, da die Landstreitkraefte mit der Freiwilligenrekrutierung innerhalb der niederlaendischen Gesellschaft rechnen koennen, auch dank der guten Arbeitsmoeglichkeiten, die den Jungen nach der Dienstzeit angeboten werden.

Portugal. Das neue Heer Gespraech mit dem Stabschef des portugiesischen Heeres, von Enrico Magnani (s. 36).

Das portugiesische Heer unterliegt z. Zt. einem tiefgreifenden Rationalisierungsprozess, dessen Endergebnisse ein bewegliches und modernes Heer soll, das in der Lage sein wird den nationalen Verteidigungsbeduerfnissen zu entsprechen und in internationale Kontingente fuer Friedensunterstuetzungsmassnahmen eingegliedert werden kann. In einem Zeitraum von sechs Jahren wird das Heer hauptsaechlich aus Frei

willigen und aus einer betraechtlichen Anzahl von Frauen bestehen. Der laufende Umstrukturierungsprozess weist keine Ausbildungsprobleme fuer das Fuehrungs personal auf, dessen Erfahrung aus verschiedenen militaerischen Missionen in Afrika, auf dem Balkan und in der Artis stammt, und bietet eine absolute Garantie fuer fachliche Kompetenz.

Heer «Projekt 2000», Richtlinien des Wandels,

von Ivan Felice Resce (s. 44).

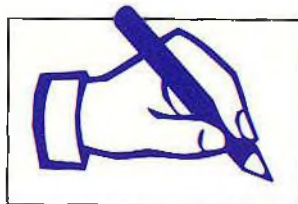
Die Modernisierung des italienischen Heeres hat begonnen. Grundelemente des neuen Aufbaus sind: das Fuehrungssystem, die operationellen und logistischen Komponenten, die Ausbildungsorganisation. Das Fuehrungssystem besteht aus der Situationsanalyse, der Bereitstellung der Operationsplaene und der Inbetriebsetzung des Validierungsverfahrens. Der Auftrag der operationellen Komponente besteht daraus, ein qualifiziertes Vorhandensein des Militaerapparats auf dem Hoheitsgebiet und seine Projektion in die Krisengebiete sicherzustellen. Die logistische Komponente strebt nach Gewandtheit, Flexibilitaet und Faehigkeit, die zusammenhaengenden Unterstuetzungsauftraege schnell zu erfuellen.

Heer «Projekt 2000», Einsatzzpakete, von Domenico Villani (s. 52).

Im Rahmen des neuen operationellen Konzeptes und der entsprechenden Fuehrungsstruktur und infolge der Revision der operationellen, logistischen, Ausbildungsmassigen und territorialen Organisationen gewinnt die Gestaltung der Einsatzzpakete groeße Bedeutung. Jedes Paket ist als eine harmonische Gesamtheit einzelner, operationeller Leistungen verstanden und zur Durchfuehrung eines spezifischen Einsatzes angelegt. Daraus ergibt sich die Moeglichkeit, die Ressourcen (Personal, Waffen, Mittel, Material, Ausgaben) zu quantifizieren, die zu jedem Paket nach der festgestellten Prioritaet zur Anpassung der operationellen Komponente gehoeren.

Fuehrung und Kontrolle bei militaerischen einsatzen, von Ivan Felice Resce (s. 64).

Fuehrung und Kontrolle bilden den Zusammenhalt aller Einheiten unter



SOMMAIRE INHALT RESUMEN

dem Gesichtspunkt der «task organization», das der Kommandeur in die Lage versetzt, die eigenen Beschlüsse und Absichten zu fassen und weiterzuleiten.

Dies ist ein komplexes und hochentwickeltes Verfahren, das der Autor die Darstellung eines auf einem allgemeinen Einsatzfall bezogenen theoretischen Modells beschreibt, um dann die allgemeinen Elemente an konkreten Fällen zu verdeutlichen.

Die Visualisierung des Gefechtsfeldes, von Pier Paolo Lunelli (s. 78).

Die Beherrschung von Informationen auf dem Gefechtschauplatz (Musterbeispiel «Desert Storm»), ist ein Teil der sogenannten «battlefield visualization concept»: ein Verfahren durch das der Kommandeur die Situation hinsichtlich des Gegners und des Umfeldes erhält und den «end state» identifiziert, mit dem die Mission abschliesst und die Abfolge der einzelnen Aktivitäten visualisiert, um seine Streitkräfte aus der existierenden in die endgültige Situation zu bringen.

Von dieser Voraussetzung ausgehend, beschreibt der Verfasser die vier Ecksteine der «information dominance»; diese sind: Kommando und Kontrolle, Intelligence, Kenntnis der Lage und der Informationssysteme.



Equilibrios estratégicos. Riesgos de destabilización, de Luigi Semprini (p. 2).

Con el fin de la Guerra Fría muchos Países del África del Norte, del Medio Oriente y del Asia Central han empezado una carrera al rearme, para adquirir armas de destrucción de masa, que utilizan vectores aéreos, misilísticos y de artillería. Por Europa y su Sur es un otro motivo de preocupación.

El Subcontinente indiano. Un gigante con los pies de arcilla, de Ornella Rota (p. 16).

Viene presentado un cuadro político-estratégico del Subcontinente indiano con su grandes Países, su desconcertantes

problemas y su enormes potencialidad culturales y de crecimiento industrial y tecnológico. Sigue una circunstanciada análisis de los conflictos internos (India y Pakistan, consideradas en posesión no declarada de armas nucleares, se enfrentaron indirectamente en todas las guerras locales desde el Birmania hasta el Nepal, desde el Afghanistan hasta el Sri Lanka).

Las actividades de operaciones internacionales, de Giovanni Manione (p. 22).

Puesta en evidencia la ineluctabilidad de la cooperación internacional en el desarrollo de «Peace support operations» vengono descritas las características y el tipo de preparación que son pedidas a los Oficiales que trabajan ante los Comandos Multinacionales: preparación profesional; conocimiento de los idiomas, de la doctrina y procedimientos de la OTAN; «expertise» informática; pleno conocimiento del ambiente.

Olanda. El nuevo Ejército - Entrevista al General Maarten Schouten, de Enrico Magnani (p. 28).

El artículo describe las difíciles etapas que el Regio Ejército holandés está atravesando para llegar a un sistema fundado en el voluntariado. La realización del programa, que terminará dentro del 2000, ha implicado una reducción del 40% del personal respecto a 1990, con una reducción del 25% del balance en palabras reales.

Portugal. El nuevo Ejército. Encuentro con el Jefe de Estado Mayor del Ejército lusitano, de Enrico Magnani (p. 36).

Cerca del Ejército portugués está en curso un articulado proceso de racionalización para crear un instrumento ágil y moderno capaz de satisfacer las exigencias de defensa del territorio nacional y de integrarse oportunamente en contingentes internacionales para las operaciones de soporte a la paz.

Ejército. «Proyecto 2000». Las líneas guía del cambio, de Ivan Felice Resce (p. 44).

El Ejército ha empezado el camino de la modernización. Elementos importantes de la nueva arquitectura son: el Comando y Control; la componente operativa; la componente logística; la organización escolar-adestrativa. El

Comando y Control se desarrolla gracias al análisis de situación, al aprontamiento de los planos operativos, la activación de las leyes de validez. La componente operativa tiene el encargo de asegurar una presencia calificada del medio en el País y su proyección en las áreas de crisis. La componente logística es tendida a adquirir esbeltez, flexibilidad y capacidad de absolver con rapidez empleos de «sostén» y de «adherencia». La organización escolar es llamada a promover un ininterrumpido proceso de recalificación profesional del personal para el desarrollo de los encargos muy diferentes también en ámbito multinacional.

Ejército. «Proyecto 2000». Los paquetes de capacidades operativas, de Domenico Villani (p. 52).

En el cuadro del nuevo concepto operativo del Ejército y de la estructura de Comando y Control, con la plena revisión de las organizaciones operativas, logísticas, escolásticas-administrativas y territoriales, toma una parte importante la configuración de los «paquetes de capacidades operativas». Todos los «paquetes», entendidos como un conjunto de singulas capacidades operativas armonicamente juntadas, son estudiados para absolver una específica misión.

El Comando y el Control en las operaciones militares, de Ivan Felice Resce (p. 64).

El Comando y el Control constituye el tejido conectivo de todos los conjuntos de fuerzas segundo el concepto de «task organization». Una función compleja y sofisticada que el Autor describe gracias la presentación de un modelo teórico referido a una general operación para profundizar los elementos conceptuales fundados en casos concretos.

Visualización del campo de batalla, de Pier Paolo Lunelli (p. 78).

El dominio de la información en el campo de batalla (la operación «Desert Storm» constituye el ejemplo clásico) hace parte del «Battlefield Visualization Concept»: un proceso gracias al que el Comandante desarrolla el conocimiento de la situación del enemigo y del ambiente, individúa el «end state» que representa absolvimiento de la misión y visualiza las actividades par conducir sus fuerzas desde la actual situación hasta la final.

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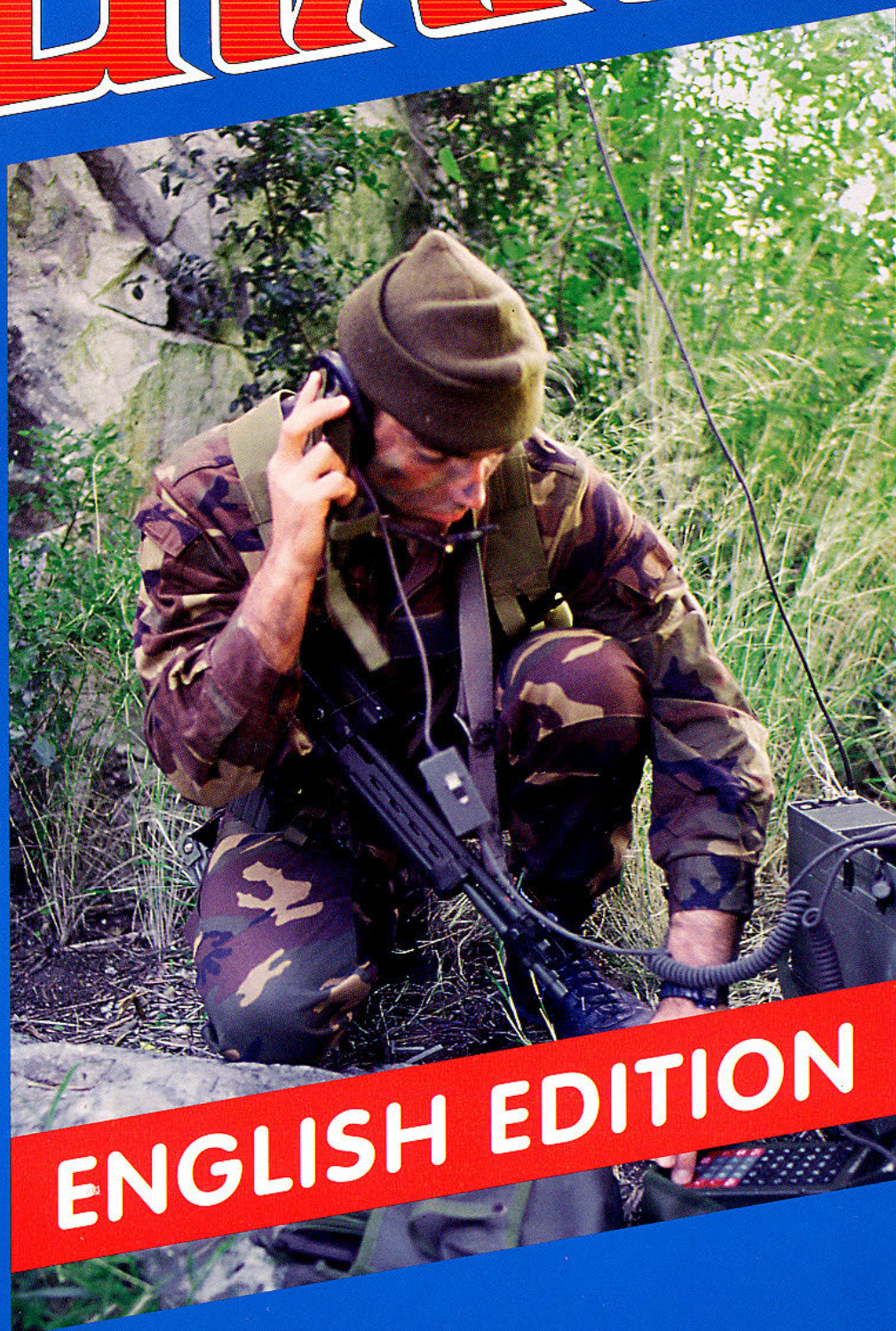
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**DEVELOPMENT AND
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DEVELOPMENT AND CONFLICTS

by Maurizio Coccia *

Economic globalization, typical of the end of this century, is a real revolution which destabilizes the existing balances, giving us the impression of entering a radically new era, capable of realizing the global management of the resources of the planet.

Actually, we are relentlessly moving towards a new form of competition among peoples, which is the prelude to serious malaise and inevitable conflicts.

If, as in one of those films of temporal transposition so fashionable nowadays, an ancestor of ours could revive and look just for a moment at our every-day activities, he would be less stunned by progress than by the unbearable acceleration of the action and by the schizophrenic behaviour of the people.

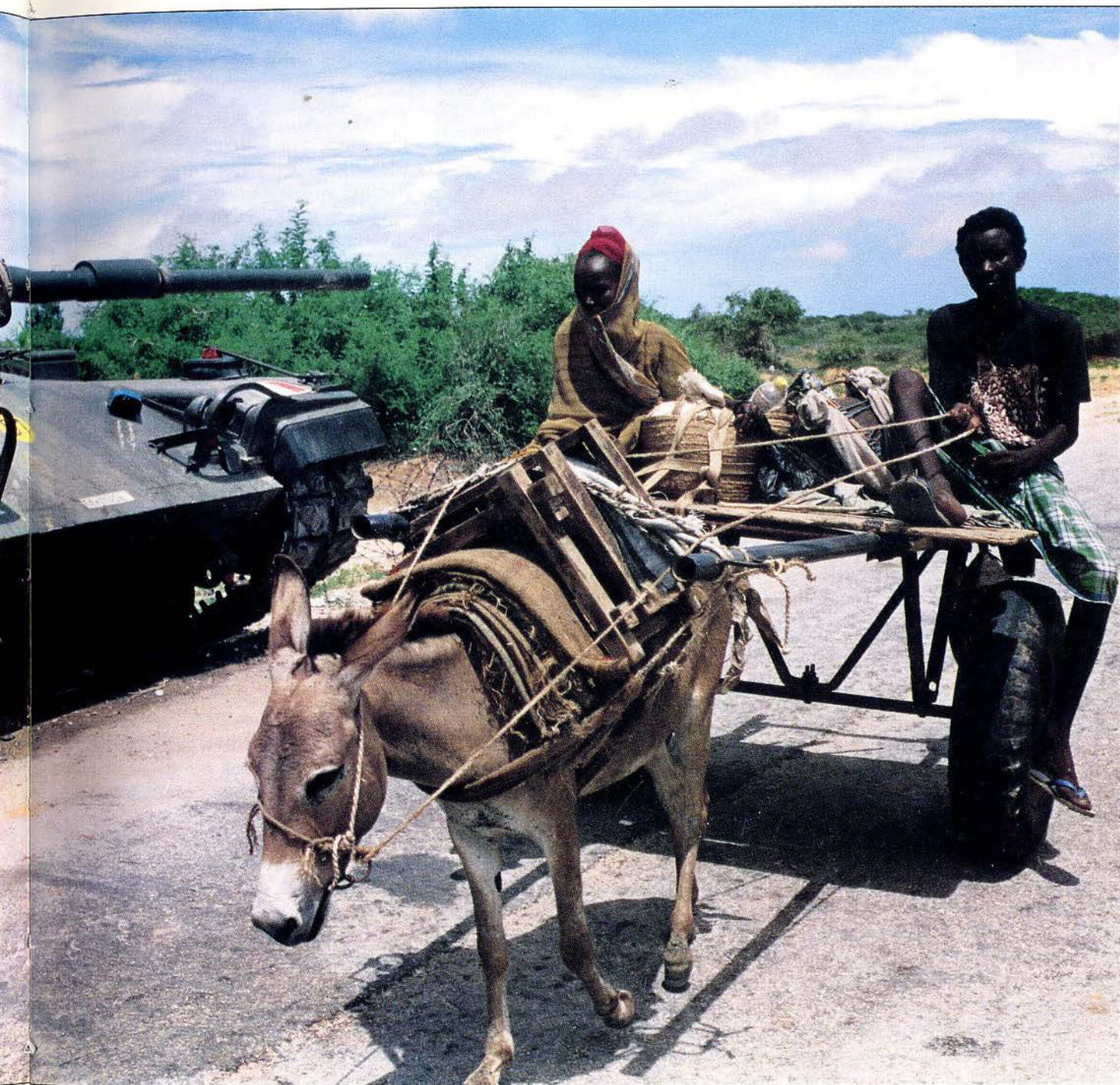
On the other hand, if we stop for a moment and look back, even just to the years of this century, the acceleration is visible and shocking. In the second half of the century everything has happened. Seemingly immutable certainties have fallen: nationalism, the importance of the territory, the very ideal concept of liberty, the flag. A good part of the hopes and spurs that used to stimulate changes, have also fallen. So did religious references and socialism, as well as

the West's solidarity vis-à-vis the expansionist infiltration of the East. Historical enmities have ended, with no significant friendships growing up. Races, ethnic groups, religions and ideals are no more barriers, at the most they remain as vehicles to exploit in order to get the upper hand. The American supremacy is turning into leadership, and this is recognized also by U.S.

government officials.

Everything seems to be at everybody's disposal, we can have all if we want it.





Everything influences everybody, suffice it to think of the Stock Exchanges. The democratic principles and the rules of the free market extend to the whole globe, taking with them progress and awareness. The autonomous and responsible decision-making power of the Nations grows, as does that of the individual citizen.

Also problems increase, because

the way is long, even if the direction is already decided. The future seems to depend mostly on the capability of self-regulation and moderation of an ever-increasing number of subjects. The individual comes out exalted from the evolution of this period, he is more and more a protagonist of history, even if not fully aware of his role, of the good and evil he can do. Time,

which was an apparently immobile pedestal of history, has become a downward track on which changes have progressively increased their speed. Time is today a coprotagonist of development, together with the individual and information. All growths have always needed their own times, and these, in the present global scenario, albeit reduced, remain different from



The Command Posts for the "Shield" operations have been established at Sarajevo's Holiday Inn.

the areas previously occupied by ideologies, needs, strategies and different instruments in a situation of different internal and international alignments.

The citizens of the world, even though they are protagonists of history as never before, still need the State as a point of reference; a State no more master or good-natured paterfamilias, but rather manager and trainer in a game whose stakes are global, universal. As such, it must justify its objectives and show adequate capabilities. When the returns are minimal, the State recedes to the still important position of a container. Whatever it might be, it is understood that it can be changed, just as any other instrument selected for one's own needs and aims. This is another of the changes this century has presented us: from the more or less happy stability to the mobility of need, to the voluntary dynamics realizing a redistribution of people over the planet, on the basis of the respective expectations, albeit still compatible with the level of the possibilities. Those who don't do this - and there are still many - are largely restrained by ethical or emotional attrition. On the opposite conceptual versant, those who have the Nation as ideology are out. And the costs of this become very soon unsustainable.

In the state's dimension, social relations and economy are the masters, and politics adjusts to them. Primacy is an obsolete concept, because it is not global. At global level, one can speak of power, responsibility and significance. The last applies in a general sense to economy, in its widest meaning, which includes most of social life, since it

country to country and from situation to situation. Times grow longer, for instance, in the newly-established countries that move to democratic and social systems from previous very different situations, characterized especially by lacking or incomplete information.

These are the countries where the search for the road to follow is more difficult; one can clearly see the urge to rapidly build global and durable instruments, prodded by the pressing expectations of the people who, in their turn, are widely influenced by the situations prevailing around them, divided by the two extreme poles of personal gain and ideal-guided action, confused between

opposite forces, between welfare state and free market.

So many different situations, changes and trends - legitimate per se, but bearers of instability - regain a cooperative role within the dimension of the national State, enhancing its governing role. It is always necessary to have an equilibrium of growth, a certain stability, in a transition period. There must be, therefore, an authority, both central and decentralized, capable of facilitating participation and constructive confrontation, of establishing rules and providing command, control and coordination. An authority able to encourage the involvement of the citizens and to wisely manage

The Army Aviation has given its contribution to the control of the Albanian territory during operation "Alba".

extends to democratization, pacification, participation and so on. This is also true because without social consensus it would be impossible to optimize the economic development and conduct a sensible policy. We know that Von Clausewitz would not like this, but we must recognize that, appearances notwithstanding, between politics and economy there is no primacy; at most, there is a grand alliance, a continuous transfer of sovereignty. The system of relations and interactions is becoming global, since it is open, both conceptually and practically. If at State level, this does not seem to be everywhere the case, it is certainly so at personal level.

And this is just the great opening that causes the turbulence we see on our planet, a turbulence that could upset our ancestors, considering that it scares us as well. The security invoked is abstract. It does not concern only risks and threats related to the military, but also attacks from every direction to the quality of life - achieved or just wished - as well as to the survival of the people and of the planet itself. So much turbulence requires as much discipline. It presupposes, therefore, the existence of institutions endowed with enough legitimacy and credibility to influence public opinions, facilitating their education and their adaptation to the present situation and the foreseeable future.

This is why national States are still essential.

"Adaptation" is a key word. Unfortunately, not all have already understood that the changes in progress cannot be derailed and should be not only influenced, controlled and guided, but - first of all - they



must be accompanied. As a consequence, the turbulence that could be called "structural" goes together with the stiffness that we have defined, "from attrition", as well as with a political and managerial rearguard action conducted by certain States and organizations of transnational or corporative character. At times, the diktat of national interests overcomes any other logic, including that of survival, for countries that, at the same time, have already renounced their national sovereignty in one or more of the classic terms of reference: territory, resources, role, international approval, national cohesion.

"Adaptation" implies a good degree of flexibility, since, whether one wishes it or not, interaction grows at all levels. If and when this is not achieved, the consequence is an inescapable tear in relations at all levels, from the individual to the coalition of States. This results in damages and in direct or indirect recourse to force.

In this situation, security and the military are not a binomial. The military, the way they are in the present context, and due to the old, well-established practice of employing them in every

circumstance, have become an inadequate instrument. For security, we need government agencies and private bodies, civil organizations able to range over the whole spectrum of the sensitivities that give shape to security. Essentially, non-military security operators must be established, starting with the media, which manage the strategical instrument of information. The military, with their structural and conceptual limitations, in the new context are useful essentially for balancing the military organizations of others; mainly, the others' wish to use them. They are only one of the components of security. No doubt a crucial element which, due to the paroxysmal technological development, needs a continuous revision, carefully barring its turning into something else.

But in the area of risks, new forms of attack are already there, and they are no less lethal than the classic threats. They move through the economic and social dimensions, raising new needs, urging new rules of conduct and new borders not easy to cross.

The organization for the defence of general and national security grows at the same rate, from year to year. It ranges from



«Centauro» armoured cars of the «Cavalleggeri Guide» Regiment, one of the units of the IFOR Italian Contingent.

the themes on the environment to the evolution of the non-employment of nuclear, biological and chemical weapons, from the mobilization against terrorism to the refusal to use force, albeit within the scope of national interests; from international laws for the preservation of the constitutional state and international organizations to the mobilization of the individual citizens, taking into due account the progressive process of reduction of national sovereignty within the framework of supranational integrations, but also in that of pacification, defence of human rights and the extensive internal debate on these subjects.

All is aimed at guaranteeing security, the security to be able to live in a democracy and, above all, to be free to apply everywhere the rules of the free market. Peace, by hook or by crook. Such a peace, in

certain conditions, could seem like forced preservation of the status quo in a rapidly changing world, and therefore an additional restraint, a further limitation to the much necessary general flexibility.

With the increase of interaction, concern also grows in a world which needs to be dynamic and is so only apparently, blocked as it is by many highly troubling elements, and still devoid of a vibrant and enticing leadership, since also the US must reckon with a number of restraints to the role that, willy-nilly, is compelled to play.

The main trend of our actions and aspirations goes towards global construction. The strategy of development is in some ways hastened, and, in some others, restrained. The classic military component accompanies the change, protecting it. Military component and development resemble the brake and the accelerator of a car on a slope: they play a worthy and cooperative role. In order to avoid departures with the brakes on, we try to prevent, as

much as possible, all kinds of threats from affecting directly the course. Foresight is an incentive to security, and so is cohesion.

Between evolution and its defence it would be necessary to have a well-tested partnership which, at the present time, is not there yet, at least at the desirable levels. In our case, there is not even an open acknowledgement of the security operators as such. The level road is still far away. On the other hand, the visible explosions of conflicts are there to show the present imperfection of the security system under construction.

In the '90s alone there have been 98 armed conflicts in the world. More than 30 were still open at the end of 1997. An optimistic assessment of the human losses in these wars leads us to calculate the death of about 5,500,000 people, 75% or more of whom were civilians.

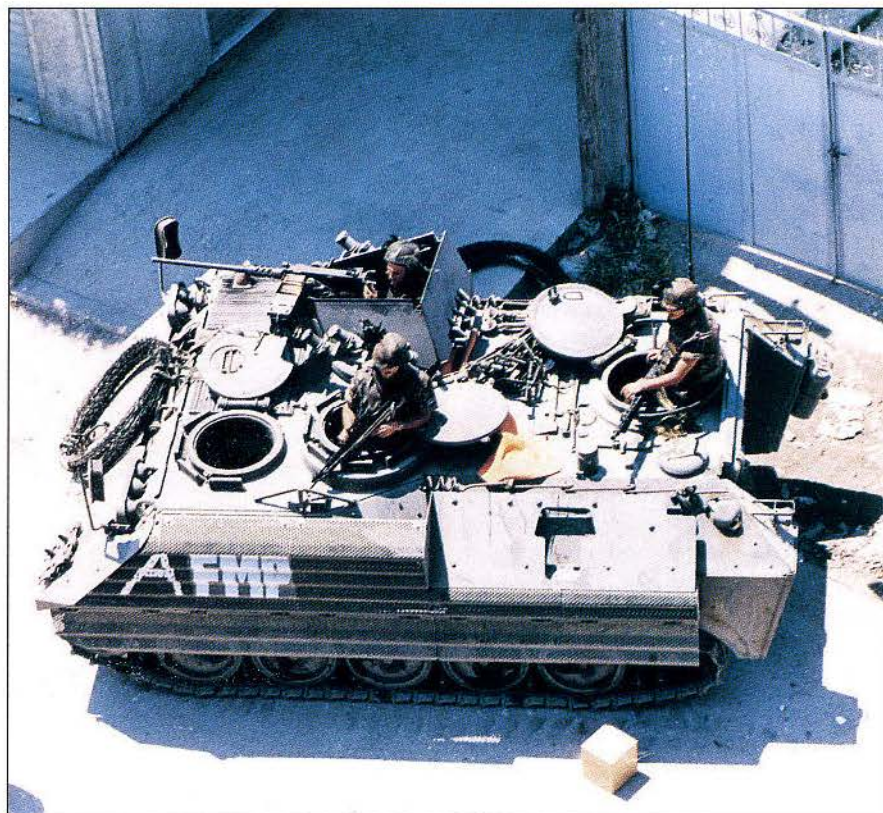
In the scenario of the early '90s, Europe is one of the most violent regions. The record year is 1992, with 12 conflicts which are worth

The «Garibaldi» Brigade participated in operation «Alba» with its men and equipment.

recalling. Armenia/Azerbaijan, Bosnia Herzegovina, dispute between Slavonia and Krajina in Croatia, Western Georgia, Northern Ossetia, Abkhazia, Moldova/Dniester Republic, Northern Ossetia/Ingushetia in Russia, guerrilla warfare in the Basque Provinces in Spain, South Eastern Turkey/Kurdistan, Western Turkey, United Kingdom and armed conflict in Northern Ireland. These are only the declared conflicts, open and recognized as such. Creeping or suspended wars, as well as situations of temporary or persisting tensions that could result in conflicts, have not been taken into account.

Not all the strife situations can be traced back to the fall of the Soviet Union, and it's not axiomatic that the increase in the number of conflicts is the sign that there will be a period of greater violence compared to the past. It is certain that a great number of conflicts is connected with the period of transition from the old to the new political and economic order, so much so that we can assume that, in the near future, the general contentiousness, particularly that existing in Europe, could generally decrease. On the other hand, easy enthusiasms are dampened by the thought that more than half of the conflicts under consideration have lasted more than 5 years. About one third have been dragging on for longer than 20 years, which leads us to suppose that the end of the residual conflicts is still far away. To all this, one should add that, evidently, although the greatest part of the armed conflicts that started in the '80s are suspended, their originating causes are still there.

Coming to the outbreak and



dimensions of conflicts and their unleashing factors, one notices a remarkable change compared to the past, when conflicts broke out essentially among States. Today global problems are increasing, as are internal strifes in the various countries, so that the States, which were active subjects, have become mostly passive and more or less innocent victims of events which originate and develop within or above them. Victims, because the outcomes have particularly hard effects. At global level absolute values come into play, such as the ecosystem, the resources, the technological power and the markets that we share, not exactly like brothers, with all the inhabitants of the planet. The repercussions of the internal conflicts are no less serious; suffice it to think, for example, of migrations, terrorism, sanctions and their effects on neighbouring countries, changes in the economic development, commerce, need to participate in coalitions or peacemaking interventions, entailing appropriate economic

and military instruments and relevant costs. In the last years the phenomena of internal disputes and fragmentation have proved to be particularly contagious. The changes which have taken place have certainly offered unique opportunities to those considering the use of the military instrument for political ends. The generating cause could have been, again, the end of the cold war, or the suspended internal disputes that have regained space and vigour just due to the reduction of the pressure exerted by their reference superpower, or to the collapse of the central authority. This, for instance, was the unleashing factor in the relations within the Union of Sovietic Socialist Republics and the Warsaw Pact. Other factors could be the frictions raising the pressure on the relations, up to the point of causing the attempt to solve the problem through the use of force. Another breach, through which violence has found its way in order to reach its political ends, was the failure of the economic policies and the considerable gaps

in the prosperity of regions of the same country or federation of States. Suffice it to think of Yugoslavia.

Trying to set in order so many causes, one can point out that the economic ones, in the long term, are the most significant in today's conflicts, starting from the reduction of the resources on which the economic order must be refounded, on to soil erosion and deforestation, from scarcity of water to the exhaustion of energy sources. Also the type of political system has a considerable influence. As a matter of fact, it was noted that it is rare for democratic countries to be involved in conflicts among States; in particular, they almost never engage in conflicts among themselves. On the other hand, they are subject to internal conflicts when there are evident economic gaps, specially if they are - or can be - associated with historical claims and ethnic motivations which, as far as we can see, are vehicles of conflict situations, but never originating causes. In countries that don't have democratic systems, violence is very easily combined with the violation of human rights.

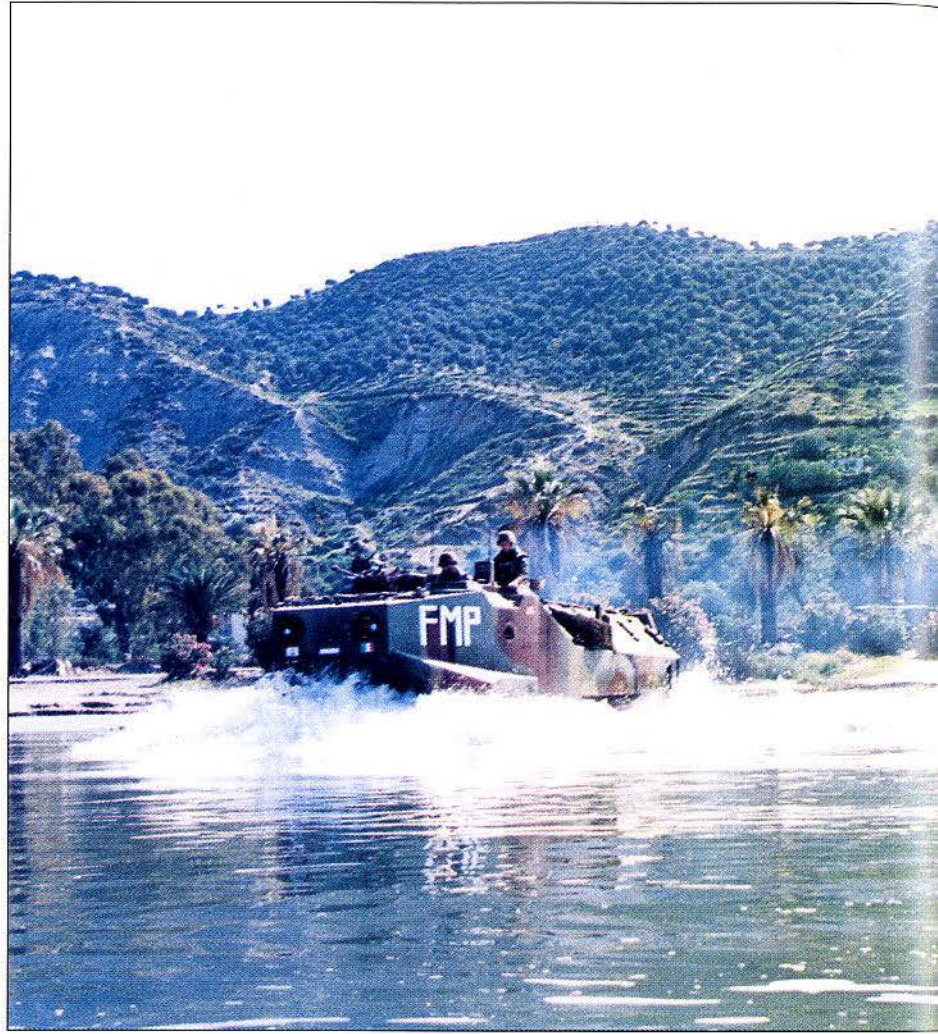
Putting together all these assertions, one comes to the theory of double injustice, from which the present and foreseeable conflicts derive. This theory stems from the consideration that a small privileged Èlite has too many resources. The systems used by this Èlite to defend its privileges create the connections between poverty, inequality and violation of human rights. This is a double injustice. The refusal to redistribute these resources compels peoples to choose between accepting this injustice or trying to achieve a better distribution of resources by any means, including violence. At the same time the economic problems, be they chronic or contingent, produce ruptures within the Èlite, and the groups

that form it fight against each other, to keep the possession of most of the resources. In cases like these, the easiest way to rally violence and reach consensus is the use of the ethnic lever and, where possible, the religious one. As we know, the coupling of these two ingredients raises the level of conflicts and greatly expands them.

Injustice therefore, when it is perceived as such, is the deep origin of conflict situations. Injustice can be exorcised only by justice, which is an absolute term and not a relative one, whose scope is general. It can be connected with the theory of universal peace, whose basic assumption is the fair distribution of resources and opportunities among all inhabitants of the Earth. This is a utopian concept, specially at the present time, dominated

as it is by economic laws, but still a reference for the growth of man.

Waiting for this realization, on which certainly everybody agrees in principle, the States behave on the basis of the resources available to satisfy the needs they recognize as such. In this perspective, they are even ready to grant help and attention to the countries with problems, to the point that they can mediate even with those who use violence in order to achieve an acceptable level of growth. Since what is acceptable is discretionary, one can say that the democratic States, just because they have much to defend, are particularly flexible vis-à-vis those who, directly or indirectly, endanger their assets. Therefore they are willing to live with injustice for the sake of





Men of the "San Marco" Battalion patrolled Albanian waters with their craft.

resources don't show any inclination to give them up below a certain level, which is very modest and seems destined to shrink even further, due to the decline of the ideal values of reference. The presence of injustice, as we have seen, leads to conflict situations, according to the process just described.

Beyond the statements of principle and the occasional mite, one feels the tendency of withdrawing into new towers, albeit virtual ones. Vico would be pleased. Then, new condottieri will come and will see, with the new arms put at their disposal by technology, to the redistribution of wealth and the consequent power, correcting old injustices and creating new ones. Everything will take place in a less cruel, brutal and physical way, but with the same rashness which prevailed in the past. Another turn in the roundabout of life, from which it seems forbidden to step down.

internal or general justice.

On the other hand, the States, to guarantee a progression of development adequate to the expectations of their people, have very few options. Either they selfishly reduce their propensity to the exterior in terms of aid and socio-economic cooperation, or they pick up an even higher growth-speed, in order to be able to proceed to a dérapage of their engagement towards the exterior, in particular towards areas geographically closer, generally considered more dangerous for their own security.

In a general sense, injustice persists, both because resources are larger than needs, and they are, above all, greater than the egotism and greed of each inhabitant of the Earth, and because the holders of the

Is this pessimism? Let's try to examine a concrete case. For instance, we can analyze the economic-financial collapse of most of the Asian Countries, those that - differently from "little steps" China and well-tested Japan - have immoderately abused the rules of the free market to realize a chaotic and unrestrained growth. The very pillars of those systems are crumbling. Until the day before yesterday, those economies were based on raw materials, on family farming and on cheap labour. The economic hole is about to turn into an abyss, and the Western economies aim first of all at a short-term exploitation of the occasion.

Already Wall Street and the European exchanges have rapidly

moved away from the initial fall. What will happen tomorrow? There are essentially three possibilities.

Isolation of the area, bypassing it from the economic point of view. We could even run the risk, in a few years' time, to discover that the emerging leadership is of a criminal mold and tends to merge into a worldwide network, with a corrosive action against the development and the expectations of the rest of the world.

Intervention in support, through a risky recovery and transfer of already-spent and absorbed incomes. This is an unlikely option, considering that no Government can conduct such a strategy without being severely punished by the reaction of public opinion.

Appoint a limited number of Countries, for example Israel, the United Kingdom, Russia, India, Japan, maybe China, to play a role of mediation and intervention in the area. This is a critical choice, because the most evident malaise is economic, and none of those countries has the resources to change the situation, not even in the long term. And yet, the Western and Euro-Atlantic response is fundamental for the development, in one sense or the other, of the international relations. The level of suffering to which the most involved Asian peoples are left exposed could create, for example, new solidarities, an amalgam not existing today, but which could even become a threat to the present balances of the planet. In the perspective of divide et impera, the second possibility seems the most desirable, although it is not devoid of risks for security, starting with the fact that the picture we can imagine is less rosy than the present one, both in the short and in the long term.

□

**Brigadier General,
Director, Military Centre
for Strategic Studies*

BELGIUM

THE NEW ARMY

The land forces are undertaking a difficult effort for their reorganization, in order to acquire, within five years, a structure based essentially on volunteer personnel. It is the same the world over. The Armed Forces of Belgium too, have to reckon with budget restrictions.

This is one of the matters we talked about with Lieutenant General Roger Maes, Chief of Staff of the Army.

General, some months ago the Belgian Army completed an important part of its reorganization. Could you outline the basic stages of it?

The reason of this reorganization originates from the strategic and geopolitical situation of the late '80s and the early '90s. The fall of the Berlin Wall caused radical changes in Europe, as well as the end of the last military tensions concentrated towards the East. In mid-92, the outlines of the Belgian Army's new structure were fixed; this caused immediate consequences on the Army. Such consequences can be summed up in three points.

First of all, we have moved to a professional Army, keeping step

with the abolition of the draft, starting from January 1st, 1994.

Secondly, the strength of the Army has been reduced from 60,000 to 27,500 units in peacetime, while the organization had to adapt itself to these new objectives.

And, last but not least, the budget has been restricted to a fixed amount for five years.

In is also to be said that several units, with all their personnel, have been moved from Germany to Belgium.

This restructuring leads us to the present situation. How is the Army organized at present?

Since the beginning of 1997 the Army is composed of a three-



Interview with General Roger Maes, Chief of Staff of the Belgian Army

by Enrico Magnani*

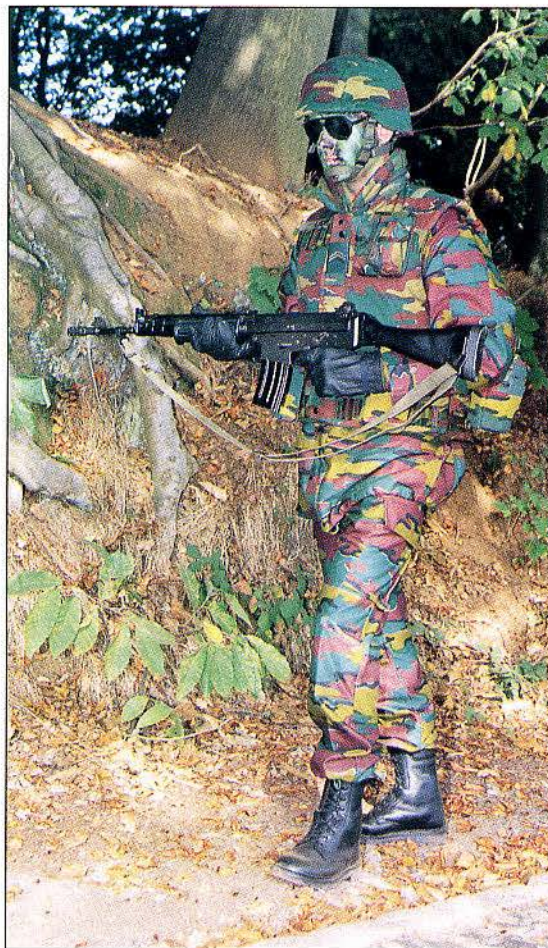


pillar structure. First of all, we have the Army Operational Command. This Command guarantees the training and the readiness of most of the units tasked to take part in every kind of operation, according to the mission required by the situation.

The Army Operational Command is composed of the 1st Mechanized Division, of the Paracommando Brigade, of the Light Aviation Group and of five firing and training ranges. The 1st Division includes, in its turn, three Mechanized Brigades and the Combat and Support Units of the Division.

The second pillar is represented by the Combat Support Division. Its mission is to guarantee the specialized and continuous training of the Army personnel, as well as the basic training of most of those who are going to become Non-Commissioned Officers. Moreover, such Division supports the Army Operational Command for Operations and training and, if necessary, it can contribute to bring to full strength the 1st Mechanized Division.

The Logistic Support Division



A professional Army must rely on motivated and well-trained men.

support in terms of supplies, maintenance and transportation, to the Army, to the Territorial Joint Command (CTI) and, partially, to the other Forces and the Gendarmerie. Besides these tasks the Division obviously guarantees, also by mobile detachments, the logistic support necessary to every kind of operation.

In the near future are further changes to be expected, as for the operational and support units?

I think that it would be wise for us to plan a period of stabilization, in order to get everything ready in

represents the third and last component of the structure. Its task is to give direct and basic

detail. Moreover, the evolution of the geopolitical situation could lead us to reconsider the organization of our Army.

The present political situation represents, according to some opinions, a new kind of threat that requires a specific response.

What units can the Army rely on in order to guarantee such response?

The situation of the present world security may require a rapid commitment in distant places and in situations of crisis. We can distinguish two kinds of action, according to the times of



The Belgian Army can commit, for peace support operations, two reinforced battalions of 1,000 soldiers each.



Starting from January 1st, 1994, the draft has been abolished in Belgium.

intervention: an action in a very short while (only a few days); and another one, which requires some weeks with the commitment of more considerable means. We are permanently able to commit, for peace support operations, two reinforced battalions; each one includes 1,000 soldiers, who can be alternated for an indefinite period. In case of serious crisis threatening the security of Europe and susceptible to turn into a major conflict, we can engage up to about 7,000 soldiers; this represents more than 30% of our strength in peacetime. Such reaction capacity to the crises is to be considered remarkable,

bearing our proportions in mind.

In the past, Belgium counted a considerable number of draftees in the ranks of its Army. At present, the Army is completely professionalized. What have been the steps to abolish the military service and what measures have been taken, at political and economic level, in order to improve the volunteers' recruitment?

On the whole, I think that we have moved rather suddenly from the conscription to a professional Army, as we know it a present. In one year and a half, we have stopped the recruitment and, one year later, the last draftee finished his military service. This has involved the shortage of personnel available to accomplish the functions

previously carried out by draftees. Now, after four years, this deficiency has not been completely filled yet.

The political decision of restricting the budget has not allowed a sufficient recruitment. Consequently, five more years will be necessary to reach the required strength. In 1997 it was decided to take specific measures for the retirement, with the purpose, on the one hand, to discharge the senior personnel in excess and, on the other, to enhance the effort for the recruitment.

The effect of such a measure on the units is still negligible.

Now, I would like to ask you a question about military women. The Army counts about 1,600 women in its ranks, that is the 5% of its strength. When did the



The renewal of the Belgian Army includes the replacement of light helicopters and the acquisition of transport helicopters.

recruitment of women begin? What have been the main problems related to the women's

integration in the planet Army? What kind of difficulties did the voluntary service cause in this field?

The women's recruitment in the Belgian Army began in 1975. There have not been specific problems, except for the

adaptation of the infrastructure and of some particular equipment articles. The voluntary service has not had any influence as, since the origin, women have been admitted only to the career Cadres.

The Army can dispose of a certain number of reserve units: now, how can all this be connected with the need of professional units, able to rapidly intervene in the new operational scenarios?

It is deceptive to think that a professional Army must dispose only of rapid intervention units. It is always better to have a force structure proportioned to the threat. The Gulf War in 1991 is an evident instance of it: its readiness



The Belgian Armed Forces still consider necessary to have a reserve available to face any kind of threat.

required several months, as well as the engagement of some US reserve units. Moreover, we cannot exclude more serious crises. For this reason, the Belgian Armed Forces still consider necessary to have a reserve available for every kind of threat.

The Belgian Army, like the Armies of the other NATO's countries, is strongly subjected to economies. How do you solve this problem?

The Army has always been strongly subjected to economies. The present budget restrictions have mainly led us to echelon the recruitment, as I have already said.

Such restriction has also led us to distribute the acquisition of new equipment over a longer period. With the withdrawal of our troops from Germany in the early 90's new investments in infrastructure arose as necessary; they too had to be distributed along a certain period of time. Some units therefore had to come back before their garrisons' infrastructure had been modified.

At the end of 1997 the Army fixed a list of equipments to get in a long time. Can you give us further details on these programs which will take the Army towards the 21st century?

The ageing of our equipments and the technological evolution have conditioned our priority choices. The renewal plans for 1997, in particular, concern:

- as for the vehicles: light wheeled vehicles, tank transporters and heavy recovery vehicles.
- as for the armament: 120mm mortars.
- as for the uniforms: the new combat dress that the Army personnel will wear during the current year.

At the beginning of the 21st century, our priorities will be mainly oriented towards:

- the acquisition of the capability of fighting at night or in reduced visibility conditions;
- the replacement of armoured infantry and reconnaissance combat vehicles;
- the replacement of light helicopters and the acquisition of transport helicopters;
- the modernization of our transport vehicles;
- the replacement of the antitank very-short-range missiles with short-range ones.



* Journalist

General Roger Maes was born in Bruxelles on April 25, 1938. After attending the junior high school at a humanistic institute, he continues his studies at the Royal Cadets School in Laeken, where he attends the Latin-Mathematics course.

From 1956 to 1961, he attends the 111th Polytechnic Course, specialization Constructions, at the Royal Military School.

After passing two years at the 6th Engineer Regiment stationed in Kassel, he is called at the 4th Regional Direction of Military Installations.

Since the end of 1965, he is on duty at the 51th Engineer Battalion as Staff Officer for maintenance. During this period, he attends a formation course at the French Engineer School in Angers, being qualified as "Mechanical Engineer Officer".

In 1970, General Maes is mandatorily moved to the Logistic Corps. After a short period of service at the Staff of the 2nd Logistic Group, he becomes Commanding Officer of the 4th Heavy Equipment Company in Werl.

Later, after serving at the Logistic Office of the 1st Corps, he becomes Director of Logistics. After attending the Senior Staff Officers Course at the Royal High Institute for Defense, he is called at the Personnel Office of the General Staff of the Army.

After having been in command at the Logistic Center no.2 in Antwerpen, he comes back to the General Staff of the Army as Chief of the Logistic Office. Promoted to Brigadier General in 1989, he becomes Chief of the Infrastructure Division of the Defense General Staff.

On March 26, 1993 he is promoted to Lieutenant General and on April 1st becomes the Commander of the National Forces. In the framework of the reorganization of the Belgian Armed Forces, he becomes the Commander of the Territorial Joint Command, formed on July 1st, 1995. On January 1st, 1996, he is appointed Chief of Staff of the Army. General Roger Maes is married and has two children.

CANADA THE NEW ARMY

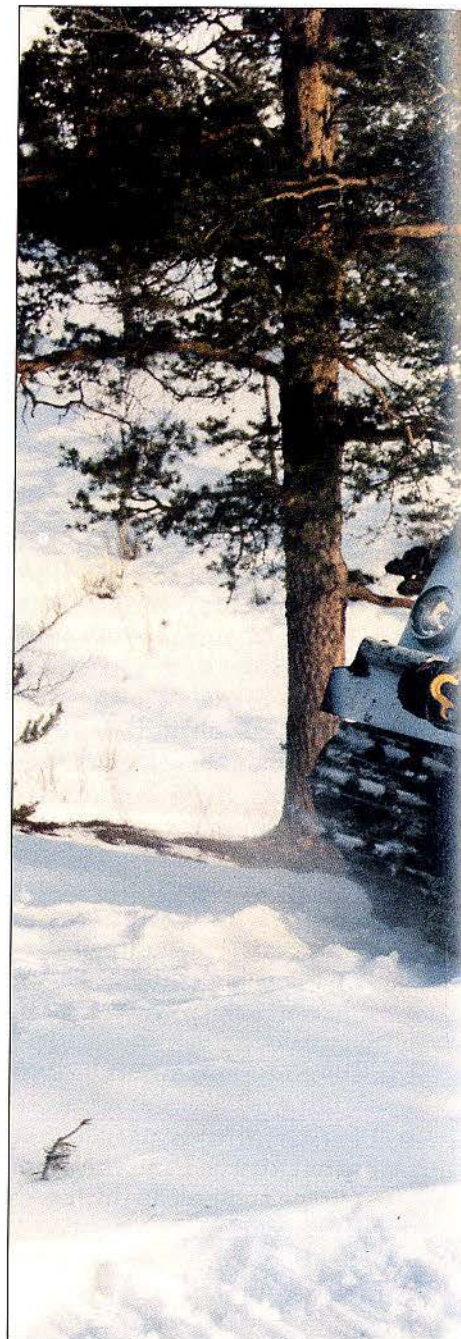
The "Land Force" has met, with success, the challenge of renewal, imposed by budget restrictions. Today Canada has a land instrument reduced but flexible, mobile and well trained, able to confront any type of threat.
Lt. Gen. Bill Leach, Chief of the Land Staff has discussed with us these and other subjects.

General, first of all, let's take a step backwards. It is by now almost thirty years that Canada has unified the three traditional Services into an integrated Force. What did this represent for the land forces?

Your first question concerns the unification of the three Services in an integrated Force, accomplished in 1966-1967. You are asking me what this choice represented for the Army. In all truth, I'll say that the decision to unify the Canadian Armed Forces was not well received by the military circles of the time. Nevertheless this step proved profitable for the Army and all the Canadian Forces, to the point that now nobody opposes it.

Besides, the unification has brought two great advantages. It

has permitted to obtain important savings in the whole of the activities of the Armed Forces and to simplify the command and control from the political and strategic point of view. The unification has facilitated the fusion of some methods and functions that before were performed separately by each of the three Services. Among the savings realized thanks to integration we can mention enlistment, acquisition and management of materials, administration of the personnel and basic training. As regards the improvements obtained from the Command and control point of view, the unification has enabled us to replace three distinct institutions with a single unified structure. As a consequence, this initiative facilitates us a great deal when it is a matter of supplying the



Interview with Lt. General Bill Leach, Chief of the Canadian Forces' Land Staff

by Enrico Magnani *





For almost twenty years, all Canadian military, men and women, have been wearing the same green uniform, which brought about also a cultural change.

political leaders with clear and unified opinions about military questions and makes it easier to make the decisions and to implement them. The unification has more than simplified many things. As a matter of fact, after the integration, for every military question a single set of suggestions, instead of three, went through the various hierarchical stages and therefore a single set of decisions and orders came back instead of three.

The constitution of integrated Armed Forces in some ways represented a decisive spur towards a Canadian national identity. Did this choice affect the traditions which represent the life-blood of an Army, ancient traditions such as the Scotch Regiments and the French - speaking units of Quebec?

More or less complex questions can be posed as regards the effects of unification on the Army and its traditions. Many books, which uphold almost as many views, have already been written on the implications of the Army's unification. Undoubtedly the disappearance of the Canadian

Army as a distinct service has affected the so-called "military culture". For instance, the questions related to the personnel and the policies concerning the equipment do not pertain any more only to the Army's hierarchy. Some maintain that this has produced a fundamental change in the procedures. The regimental system of the Army has been more or less preserved, especially as concerns armoured units, artillery and infantry.

The unification in itself did not cause the disappearance of the old Regiments such as the Black Watch (Royal Highlanders of Canada), the Queen's Own Rifles of Canada, The Royal Canadian Regiment, Les Royal 22nd Regiment or Les Fusiliers Mont-Royal. To answer to the last part of the question, the unification did not cause the disappearance of traditions in the heart of the French-speaking units or the units of Scottish descent. Similarly the unification did not do away with regimental flags or with the military marches of the armoured regiments, of the Artillery or Infantry.

Nevertheless, some will continue to maintain that, without an only-Army line hierarchy of Command,

the centralization of the questions concerning personnel and equipment and the creation of joint organizations and structures have altered the military ethos in Canada, for all three Services.

During the last twenty years, all the Canadian military, men and women, have been wearing essentially the same green uniform, which has led to a change of culture. In someone's opinion, the common green uniform worn after the unification embodied its own culture. With time, a growing number of alterations have been authorized and made to the green uniform, specifically for the Army and its Regiments. For instance, in the case of the Canadian regiments of Scottish or Irish descent, the possibility to wear the kilt as official uniform, has permitted to keep their particular identity. Likewise, the armoured units have continued to wear their black beret.

The units that could afford it have also continued to wear their full dress as they did before the unification. Today, with the return of slightly differentiated uniforms, one can immediately distinguish land soldiers from sailors and airmen.

As each person has his own way of conceiving "the vital heart of an Army" it is almost impossible to probe into the question of the impact of unification on the Army without writing a book of a hundred pages (or many books of several hundred pages; those written by Douglas Bland are certainly the best on the subject).

But it must not be forgotten that thirty years have elapsed since the Canadian Armed Forces were unified. During this period, very important social and strategic changes have occurred which have led to a substantial



reduction in the budgets destined to defence. Due to these factors, that have very little to do with the unification, the Armed Forces (and the Army component) are much reduced as compared with 1968. It becomes therefore extremely difficult to tell whether the change undergone by the Army since 1968 should be ascribed to the unification or to the other important influences

mentioned before.

For some years the budget of the Canadian defence has been subjected to heavy cuts. What are the lines adopted to maintain the credibility of the military instrument, given the reduced financial resources?

The budget of defence underwent important reductions since the end

of the cold war. As a consequence, the Ministry of National Defence (MDN) and the Canadian Forces (FC) had to devise different systems to meet the challenges related to the changes brought about in the strategic sector. In order to maintain the credibility of the Ministry, both at home and abroad, we have given priority to operations in all the initiatives of change undertaken. Although a certain number of key-factors have concurred to our success, two of our most important initiatives have concerned first of all the rationalization of the infrastructure and the reorganization of the command and control structure. As regards infrastructure, it was clear that due to dimension and age, they could not be managed with the resources remained at the disposal of the Ministry. Consequently we had to take a certain number of initiatives aimed at rationalizing what we could afford and what we could not. The most important repercussion of this measure was the closing of some bases in Europe and at home. Besides these suppressions, the MDN/FC continues to study other possibilities of diversification of the ways of supplying the services regarding the support not essential to the military activities. This will enable us to devote most of our limited resources to the maintenance of our combat capabilities.

Following the reduction of effectives and infrastructure in 1995 the Ministry launched a large initiative of reorganization of the Command and control, with the purpose of reducing to a half the number of the resources employed for the functions performed by the Headquarters. This project has important repercussions on the working methods of the MDN and FC and will continue to have them along the years. Besides the changes that were, and will be, brought to the structure, the Ministry continues to make a striking progress in the creation and



putting into practice of methods for the management of the resources. In particular, the planning of the activities and the acquisition of instruments that measure the efficiency and verify the costs for every specific activity contribute to improve our ability to manage more activities with less resources.

We have not finished yet, but we are going in the right direction!

It is equally interesting to note that the Government of Canada has adopted the activity-planning concept in order to make it a key-element of its renewed system of expense-management. The officialization of the reports on the projects published last Spring and those on the efficiency published last Autumn by all Ministries should considerably contribute to improve the Government's management of

resources. The MDN/FC represents the most important Federal Ministry and has committed itself to become file-leader in the creation and implementation of initiatives for a better management of the resources.

The Land Forces Command is a numerically reduced force albeit with high professional and technological qualities. This inevitably entails making recourse to reserve forces which, in their turn, must be equipped and trained in order to be interoperational with the regular forces. How do you tackle this problem?

The Canadian Forces adopted the concept of Total Force with the White Book on Defence of 1987. This concept can be defined as follows: a combination of members of the regular Service

and of the Reserve, which constitutes an economic and polyvalent combat potential, at the wanted training level.

In December 1996, the Army Command indicated that the reason of existence of the Land Force's Reserve was to be a mobilization force in case of conflict but its main task was to augment the regular Force in times of threat.

The concept of Total Force shows that the Army's practice is to train the regular or the reserve soldier according to similar instruction and operational standards; owing to the fact that the reservists of the Canadian Forces are volunteers and have no obligation to serve, this practice functions relatively well as far as basic training is concerned. When time becomes a critical factor and training more complex, the success is more moderate for obvious reasons of

The concept of "Total Force" shows that the Canadian Army proceeds in the training of the regular soldier or reservist according to similar training and operational rules, while maintaining, at the same time, its polyvalent combat capability.

times and costs.

During the first year of service, the reservist devotes on the average almost 100 days to his basic and specialization training. After that he will have the possibility to complete his training for 65 days a year, especially during the weekends from September to May and in a single period of 14 days in Summer.

A contingent deployed on an operational theatre can include up to 20% of reservists. The percentage of the Reserve depends on the type of mission, the speed of deployment, the need to maintain the integrity of the Regular Force and on the time available to train the reservists. The preparation consists in adding the reinforcements of the Reserve to the unit of the Regular Force for a period of pre-deployment training of ninety days. The reservists carry out the same training as their colleagues of the Regular Force. This pre-deployment training and the distribution of the reservists throughout the unit encourage a complete integration of the two elements in a quite efficient operational force.

The Italian Army has committed itself to an effort of structural and operational reorganization, in order to create a streamlined, flexible instrument, which could be easily integrated within international contingents. What are the most important tasks which the Land Forces Command is planning or that are already in progress?

It is a very wide question. The most important task that the Land Force has to carry out is the



maintenance of a polyvalent combat capability. This goal will not be attained without difficulty. Given the present financial situation and the absence, at the moment, of a real threat for Canada, public opinion is less inclined to support war plans. Moreover, the nature of the missions and tasks that the Land Force was called to carry out during the last years - generally, low-intensity peacekeeping operations -

did not allow us to devote the little time and the scarce resources at our disposal to maintain an adequate degree of preparation, in view of high-intensity operations. Despite these challenges, the Service retains the main task to keep its polyvalent combat capability and will be able to surmount all obstacles to be up to it. In addition to this commitment, the Army must concentrate on other activities that go from the





modernization of the Service to its financial reorganization, without forgetting the improvement of operational training and the initiatives aimed at obtaining more savings in the non-essential activities.

From 1949 to 1993 the Canadian soldiers have been a guarantee of the bonds between Europe and North America, by training and cooperating with their NATO comrades. What is

today the contribution of the Canadian land forces to the Atlantic Alliance?

The commitment of the Canadian army to NATO remains as before. Since our withdrawal from the European theatre, we have continued to keep at NATO's disposal a mechanized brigade and a light combat group. These two Major Units are available for NATO's contingency plans. Moreover, we have similar engagements connected with the



The Land Force Command has gained a vast experience in peacekeeping operations, after the changes in the political conditions due to the end of the cold war.

defence of our continent, jointly with our American allies (CUSRPG - Canada US Regional Planning Group).

The Land Forces Command has matured a vast experience in peace-keeping operations. What are the doctrinal and political lessons learned from its frequent participation in peace-keeping missions under different flags?

The most important lesson is very simple. Only a soldier trained for war can play an effective role during a peacekeeping mission. In reality only war training gives the military the knowledge that will enable them to carry out their mandate during a peace mission. At political level, it must be evidenced that since the end of the cold war the conditions on the terrain have changed a great deal. The two former superpowers are no more in a position to intervene with a mediatorial role like they did in the past. The belligerents are free to act as they choose and can now employ military and political means which are difficult to control in particular situations (such as, for instance, that of former Yugoslavia).

The operations in Yugoslavia and Somalia have taken the shape of real conflicts rather than peacekeeping operations. What do you think will be the future of these two operational profiles, initially opposed?

You are mentioning two aspects which have both their own reason to exist if considered in their respective contexts. The key of



their success resides in the definition of the tasks in relation to the problems encountered. A task well defined and carried out by well trained and well equipped troops will have a considerable operational capability - therefore these two aspects have certainly their place in the present geopolitical context.

With the fall of the Berlin Wall the politico-strategic international scenarios have changed and NATO's Strategy concept is being challenged. As a consequence, there is the need to find new training procedures for the military cadres. What are the present initiatives taken by the Land Forces Command to prepare the personnel?

Since the 1st Canadian Division left Europe we have noticed a considerable increase in our

operational rhythms, particularly in former Yugoslavia and Africa. This increase has produced a reduction in the quantity of efforts which we could devote to the training aimed in maintaining the polyvalent interservice capabilities. In fact we have carried out only few joint or combat group exercises, except when these were part of the requirements of operational training. As a consequence, at present the Army is training to recover certain capabilities which have been diminishing and emphasizes again interservice training, and plans have been made to provide the equipment and rules which permit to carry it out. For example we are now experimenting a set of norms of combat aptitude, destined to the Commanders for the assessment and improvement of the efficiency on the field. We also have a conceptual model of a Canadian Centre of manoeuvre simulation to evaluate the effects of the various

weapons and improve the collective capabilities.

Regarding the programme of individual training, we believe it necessary to strengthen the quality and quantity controls in this period of curtailment of resources.

Moreover, various initiatives are being carried out by the General Staff in order to optimize our investments, in relation to the resources available we are still convinced that we can form highly qualified and capable soldiers, among the best in the world, and we have accepted the challenge being careful to give our men an efficient preparation, in view of the roles they have to play, both in wartime and within operations other than war.

The Canadian military effort is oriented not only towards the Atlantic scenario but also to the



Pacific. Will the increased strategic importance of the Asiatic area, together with the great tensions that occur there, entail a reorientation of the Canadian Land instrument?

Excepting the role played in the Korean war, the Canadian military participation in the security of the Asia-Pacific area after WWII was limited mainly to a contribution of personnel in the various observation and peacekeeping missions, particularly in Pakistan, Vietnam and Cambodia. After the cold war, the government of Canada has regained interest in this area and has hinted that the Ministry of National Defence has a key-role to play there. Nevertheless, this role could be somehow different from the traditional one, that which up to now MDN has carried out in Europe, principal region of its

commitment abroad.

At the same time the MDN role in the Asia-Pacific area remains presently limited by two key-factors: the cuts in the Defence budget and in the structure of the Service, and a new world-level task formulated in the White Book of Defence in 1994. If MDN is to sustain Canada's goals in the Asia-Pacific sector under the reservation of these two conditions, the Ministry will have to make well-reasoned choices on how and where it is going to employ its more and more limited resources.

Canada's interest in the Asia-Pacific area is mainly economic. As a matter of fact, the Canadian government has learnt that a country's influence depends increasingly on the solidity of its economic relations. Consequently, the promotion of prosperity and employment is at the core of the Government's cares and is its first

objective as far as foreign policy is concerned. The trade relations that it is going to establish with the countries of the Asia-Pacific area are therefore essential. In Canada, prosperity and employment increasingly depend on trade. Although 80% of Canada's trade exchange is done with the United States, the greatest growth, both for Canada and for the rest of the world, depends on the flourishing economies of a small number of Asiatic countries. From now to the year 2020, predictably the region will have seven of the ten most important world economies and will possess 60% of the world market. Canada at present holds only 1,5% of the market in the Asia-Pacific area.

The MDN presence in the region remains generally modest, with the exception of the relations of bilateral defence with the United States, Australia and New Zealand.

The Canadian Army is carrying out a programme of individual training capable of shaping highly qualified and competent soldiers, in view of their future operational roles.

Despite its participation to the political development of the Regional Forum of ANASE (FRA), Canada does not belong to any official military alliance in the area, if one excludes the Canada-US cooperation for the defence of North America and the sharing of responsibility regarding the maritime North Pacific frontier. The relations with Australia and New Zealand constitute an extension of the historical bonds of Canada with the Commonwealth countries, together with some quadrilateral provisions concerning the exchange of information.

The Canadian military presence in the Asia-Pacific area is ensured by seven Military Attachés who are associated with 13 countries, with the most part of which Canada has maintained bilateral relations, through rare visits made by authorities, a modest programme of exchange and liaison, some visits for technical aid and sharing of experiences within the sphere of peacekeeping in the world. Canada participates with Australia, Japan, the Republic of Korea and recently with Chile, also in the RIMPAC exercise, organized by the US Navy every two years. Moreover, it regularly participates to other exercises, mainly naval ones, with the United States in the Pacific.

With its programme of support to military instruction (PAIM), MDN has given to many countries of the Asia-Pacific area the possibility to send their personnel to attend courses in Canada. Bangladesh, Malaysia, Nepal, Thailand, Singapore and South Korea are among them; the last two participate according to a cost-recovery principle (owing to their high GNP per capita). The PAIM



funds have been spent for a series of activities that go from the instruction of flight personnel to the peacekeeping courses offered by the Pearson Centre.

Besides PAIM, other exchange programmes have been organized with Australia, India, Malaysia and Pakistan, although the last three

programmes were suspended because of a reduction in the number of places for foreign students at the Canadian Forces' Command and Staff College.



**Journalist*

Lt. Gen. Bill Leach was born in Sarnia, Ont. His military career began in 1960 at the Collège Militaire Royal de Saint-Jean and he graduated from the Royal Military College of Canada in Kingston in 1965 with a degree in economics and commerce. In 1968 he attended the Canadian Forces' Staff College. Lt. Gen. Leach served in Germany and in the Near East. In Germany, among other positions, he held that of Officer Commanding the National Support Element for Allied Command Europe Mobile Force (Land). From 1975 to 1977 he was Deputy Assistant Quartermaster General (Operations), 4th UK Armoured Division, British Army on the Rhine (BAOR). He served as an instructor in the Royal Canadian Ordnance Corps School, Montreal, and held several important positions in finance, supply and operational logistics. In 1986, Lt. Gen. Leach was presented with the Order of Military Merit. During the Gulf War, he was Director of Logistics Plans and Operations. In the recent past, he has been involved in major change initiatives, particularly in the materiel sector. On October 13, 1995, he was appointed Deputy Commander of Land Force Command and Commander, 1st Canadian Division. On September 24, 1997, he was appointed Chief of the Land Staff. Lt. Gen. Leach is married and has three children.

Arm

Continuing our initiative to describe the guidelines of the organizational model of the Army, we present four more articles:

- <<Capability Packages. The "Combat" Function>>, by Col. Domenico Villani and Lt. Col. Sabato Errico. The work describes the composition and function of the manoeuvre forces charged with conducting close combat with direct-fire weapon systems.
- <<Antiaircraft Artillery - Development and Prospects>> by Lt. Col. Sauro Baistrocchi. The article outlines the role and tasks of antiaircraft intervention, emphasizing a new operational concept based on the "single strike" strategy, i.e., on the need to reduce to zero the risk of human losses during military operations and to control and govern in advance every foreseeable situation applying

restrictive and detailed rules of engagement.

- <<The "Combat Support" function. The Engineer Corps>> by Brig. Gen. Ivan Felice Resce and Lt. Col. Mario Ruggiero. The work illustrates the activities typical of the Engineer Corps, stressing the innovations in the sectors of mobility, countermobility, protection, general support and clearing of explosive devices;
- <<Land Artillery. Development and Prospects>> by Col. Rocco Panunzi and Lt. Col. Gualtiero De Cicco.

The article outlines the future organization of the Land Artillery at Land-Forces and Brigade level (with the Fire Support Operational Centre as a possible cell of the Advanced Command Post and of the Intermediate Operational Command) and points out the possible developments of the system.

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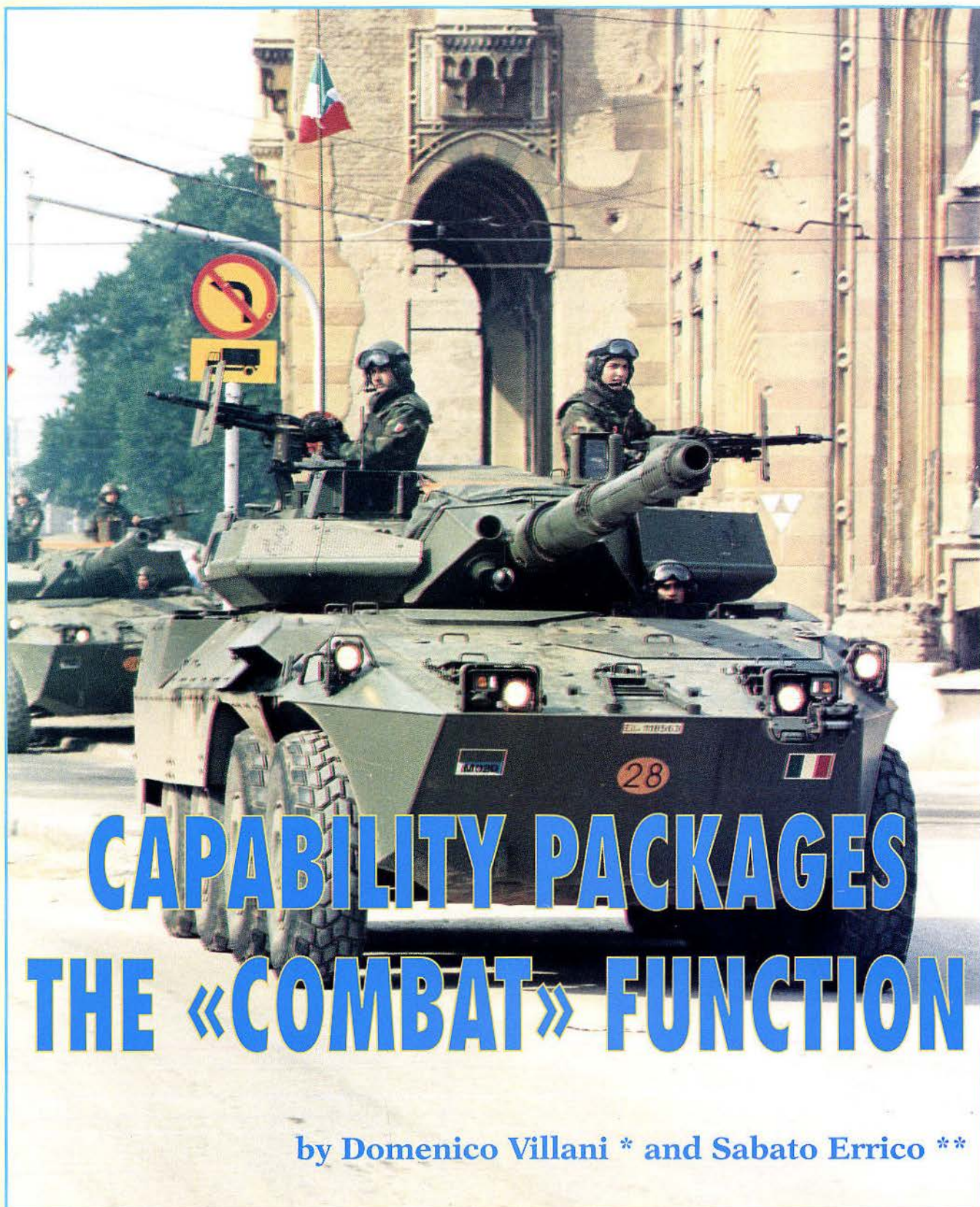
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ARMY PROJECT 2000



The Project on the «Operational - Capability Packages» has been worked out with the intention of reconfiguring the Army on the basis of the emerging operational requirements. The Project aims at a synergic flow of all available resources towards objectives corresponding to specific, concrete, coherent and compoundable capabilities (partial objectives) achieving - on short, medium and long term horizons - the whole design of the Service, progressively but with accomplished partial systems, operationally employable during each phase of the programme's development.

The "Capability Packages" are, in substance, the **macrotargets that the Army intends to achieve in correspondence with its great institutional missions** (Fig.1).

As a consequence, the land military instrument has been divided into **Projection Forces, Reaction Forces and Presence-and-Surveillance Forces**.

This division has required the definition of elementary modules which, within each package, are called to develop a specific operational function (Fig. 2), to the development of which also other types of modules can concur. As regards the "Combat" function, the point was to determine the elements which must characterize the infantry and cavalry units, as well as the relevant elementary modules present in all packages, in order to give them the highest functional efficiency in all the operational contexts described in the missions assigned to the Service (peace, crisis, war).

In relation to the operational capabilities that each «force package» must represent, the following studies have been conducted:

- scrutiny of the "Combat" function and relevant component activities;
- description of the characteristics

Fig. 1

MISSION	OPERATION
Defence of External Interests	Humanitarian Interventions
	Peace Support Operations
Presence and Surveillance	Forward Presence
	Concurrence in Safeguard of Institutions
	Concurrence for Welfare of Community
Common Defence	Deterrence
	Prevention
	Direct Defence

Fig. 2

OPERATIONAL FUNCTIONS
Support to Command, Control, Communications, Computer (C4)
Intelligence
Combat
Combat Support
Combat Service Support
Command and Control Warfare (C2W)
Security and Protection
NBC Defence
Electronic Warfare (EW)
Psychological Operations
Host Nation Support (HNS)
Public Information
Civil - Military Operations
RSTA

and role of the Basic Branch in operations;

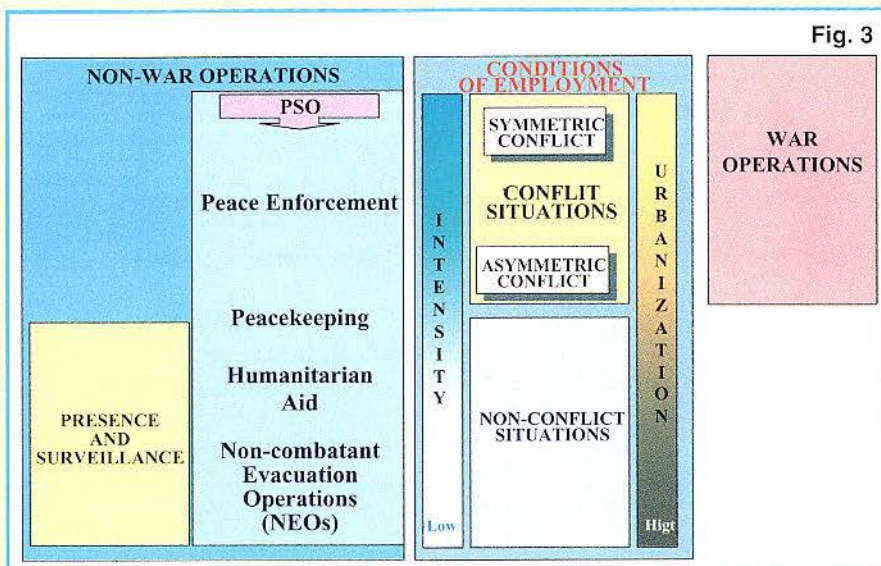
- definition of types of units and their distribution in the "force packages".

OPERATIONAL CAPABILITIES

FOR THE «COMBAT» FUNCTION

The «Combat» function

This is the function assigned to the "manoeuvring forces", consisting of the Basic Branch



Light Aviation units, they assume an air-mobile configuration, acquiring the ability of freeing themselves from the limitations of terrain and roads; furthermore, the presence of attack helicopters gives them greater firepower. Light units can also be equipped with wheeled armoured combat vehicles, characterized by high on-road mobility, good cross-country operation and remarkable firepower (integrated light guns and A/T missile systems).

Mechanized units

The mechanized units,

units which conduct close combat, employing mainly direct-fire weapon systems. It is the "master" function in every type of operation, envisages diversified actions in relation with the operational context (Fig. 3) and requires, therefore, the availability of Regiment-level monofunction modules, with operational capabilities characterized, in relation with their particular package, by a different combination of the following indicators: **projectability, protection, firepower and mobility**.

Attributing a variable value from 1 to 4 to each of these indicators, it was possible to define the types of units necessary for the composition of the individual force packages (Fig. 4).

Forces designed for the "Combat" function

On the basis of the procedure mentioned above, the infantry and cavalry Regiments designed for the "Combat" function can be classified as: **light, mechanized and armoured units**.

Light units

The light units are equipped with wheeled tactical vehicles

Fig. 4

INDICATORS' VALUE				
FORCES	PROJECTABILITY	PROTECTION	FIREPOWER	MOBILITY
PROJECTION	4	3	2	4
REACTION	4	3	4	3
PRESENCE AND SURVEILLANCE	2	2	2	3

(VMT, VMTK, VMP and 4x4 or 6x6 VBL) and are mainly armed with light weapons. They are therefore characterized by a large degree of projectability (specially when they move on aircraft) and by high mobility (mainly on roads). Their level of protection is limited to the offences coming from individual arms, while their firepower consists of individual and crew arms as well as antitank weapon systems. When they are employed together with

equipped with transport and combat vehicles, on tracks or wheels, follow the parameters of the tactical formula according to the priority traditionally attributed to them by the Italian Army: firepower, mobility and protection. The first is given by the medium-calibre and A/T missile systems on the vehicles, the second by the capability of moving off-roads at a high operational speed, while the third is provided by their armour,

capable of withstanding the shots of medium-calibre weapons.

Armoured units

The armoured units are equipped with high-protection, high-firepower vehicles, both wheeled ("Centauro" armoured car) or tracked (Ariete" or "Leopard" combat tank).

In particular, the heavy armoured units (cavalry regiments designed for the "Combat" function) are characterized by high mobility (specially on roads), high firepower, thanks to the guns of the heavy vehicles, and very good protection.

Furthermore, within this function, the **attack helicopter regiments** of the Army Aviation must also be mentioned. Thanks to their flexibility, firepower and mobility also on terrains "impossible" for the land forces, they are an exceptionally mighty instrument in the hands of the Commander.

The modern operations of peace support, as a matter of fact, presuppose the availability of contingents able to express a strong deterrence in order to be credible. In this perspective, the attack helicopter units are particularly fit for the development of high-value and very visible activities (area security, armed reconnaissance, armed escort to convoys and units, etc.). In classic operations, attack helicopters are likewise able to execute timely, powerful and precise interventions.

Activities of the "Combat" function

The main **activities** of the "Combat" function are those summarized at Fig. 5.

The employment of light, mechanized or armoured forces depends on the characteristics of the operational environment, the presumable threat and the

Fig. 5

CLASSIC OPERATIONS		PEACE SUPPORT	
ACTIVITY	TYPE OF FORCE	ACTIVITY	TYPE OF FORCES
Control Large areas/Counterinterdiction	Light Mechanized	Observation	Light Mechanized
Defence of zones or built-up areas	Light Mechanized	Surveillance	Light Mechanized
Mobile defence /coverage	Mechanized Armoured	Interposition	Light Mechanized
Counterattack	Mechanized Armoured	Check point	Light Mechanized
A/T Action	Mechanized Armoured	Protection of refugee camps	Light Mechanized
Preventive occupation of areas	Mechanized Light	Convoy escort	Light Mechanized Armoured
Attack	Mechanized Armoured	Patrolling	Light Mechanized
Area interdiction	Light	Defence of itineraries	Mechanized Armoured

tactical actions to be carried out.

ROLE AND CHARACTERISTICS OF THE BASIC-BRANCH UNITS

In the present operational scenario, classic operations - be they offensive, defensive or delaying ones - are characterized by the synchronization of activities developed in depth, in contact and behind the front, as a harmonic combination of all elements of "Combat power".

The Basic Branch is the key element in the conduct of these operations and the cornerstone of the so-called "manoeuvre forces", i.e. of those forces employing fire and movement to engage the enemy with direct hits. They are therefore different from the forces using indirect fire to hit the enemy or giving support to combat. The "manoeuvre forces" belong, in the Italian Army, both to the Infantry and the Cavalry and, as we have already said, can be light, mechanized and armoured.

In **non-war operations** (Presence and Surveillance-PSO) the Infantry and Cavalry units can be called upon to carry out interventions of different intensity,

depending on the type of mission. In general, it is profitable to employ, in low-intensity operations, light-infantry units, more suitable for timely interventions, or deployments aimed at freezing a risky situation, in view of the arrival of the reinforcements necessary for obtaining the final conditions desired.

The rise in the level of tension (essentially in PSO) may require the employment of armour, heavy armour, mechanized and tank units - in that order - initially as deterrent elements and then to develop strong actions, typical of traditional combat. In particular, therefore, also within the wide range of activities which go under the heading of peace support operations, the Basic Branch units, due to their equipment and employment procedures, are the most fit to be the "core" of the Intervention Forces.

A synthetic description of the characteristics of the various types of units follows in the next paragraphs.

Light Infantry

The units of light infantry and

relevant specialities (alpini, paratroops, contingents for airmobile units), are equipped with tactical wheeled vehicles and/or light armoured cars with limited protection. They are characterized by high operational mobility, remarkable flexibility, sufficient firepower and limited protection.

They are suitable for operations on most terrains and in different weather conditions. They can carry out a wide range of missions within the entire conflict spectrum, **from war to non-war operations.**

In operations that have to be carried out within limited time-frames, they are the first nucleus of the forces to be projected, thanks to their remarkable lightness and capability of rapid deployment at operational and strategic level. In the tactical field, these forces can be employed to rapidly take the initiative in operations, acquiring and keeping control of key objectives, before the influx of mechanized/armoured forces and tactical/logistic support units. They are particularly fit for operations on compartmented ground, which poses heavy limitations to off-road movements. The light-infantry forces, appropriately reinforced with antitank weapon systems can contrast the actions of armoured/mechanized enemy units.

These units are trained to move also on foot, if necessary. Their tactical mobility can be improved with recourse to helitransport and, in relation to particular tasks, can be reinforced with armoured, tank, and mechanized units. The following Specialities carry out specific duties within the framework of light infantry.

Alpini

The alpine units are able to operate in mountain environments, in severe weather conditions, and on terrains that give scarce possibilities of movement to vehicles.

In this context, they are suitable for:

- conducting surprise actions, operating between facilitation routes of low potential but high yield;
- extending their actions outside the facilitation routes, also in winter conditions;
- persisting in the operations, thanks to their high autonomy, both operational and logistic, reaching down to the lowest levels;
- operating also outside the Alpine Region, in particularly compartmented areas and/or with poor road-practicability.

Paratroops

The paratroop units are able, due to their training, equipment and mentality, to conduct rapid and "unprejudiced" actions, at very short notice. In particular, they can be employed in airborne and airmobile operations, and can:

- carry out activities of interdiction and preventive occupation of areas;
- be employed mainly in the first phases of out-of-area interventions.
- Because of their reduced logistic autonomy, these units could have limitations when conducting protracted actions.

Airmobile units

The airmobile units which are now being established ("Friuli" Brigade) include a land component and a helicopter component, as parts of a single complex subordinate to the Commander of the land component. The second component (Army Aviation) does not limit itself to the helitransport of the land component, but participates in every phase of the operation. It is therefore a unit with remarkable characteristics of mobility, flexibility and firepower, which are the result of a

combination of the tactical peculiarities of helicopters (speed, agility, high firepower) and light infantry units, appropriately reinforced (capability of operating in all environments, versatility of employment).

They are, therefore, units capable of realizing timely concentrations of power at the wanted time and place, of acting in different operational situations and natural environments, as well as giving concreteness to the principles of manoeuvre.

Mechanized infantry

The mechanized infantry is essentially characterized by high off-road mobility, protection and firepower, with a good antitank capability. It includes units equipped with transport and combat tracked-vehicles, units with transport and combat armoured vehicles on wheels, and lagoonal (amphibious) units equipped with their specific vehicles (LVT-P7).

Mechanized units on Armoured Combat Vehicles (VCC):

These units have characteristics of mobility similar to the tank units, adequate protection, sufficient firepower and high flexibility of employment. They are capable of:

- working in any natural environment, thanks to their capability of operating both on board VCCs and on foot;
- carrying out protracted actions;
- conducting systematic efforts and dynamic actions over wide areas, mainly making use of their mobility on varied ground.

These units are normally employed, in synergy with tank units, in high-intensity operations (war, regional conflict, peace enforcement), but can also be employed by themselves in



«Ariete» tank.

peacekeeping operations.

Mechanized units on Armoured Wheeled Vehicles (VBC)

The configuration of these units is similar to that of those on VCC, but they have transport and combat wheeled vehicles (VBC).

They are therefore characterized by good protection, high mobility - specially on roads - and marked flexibility.

Thus they are units capable of carrying out a wide range of tasks in all types of operations. In particular, in offensive and defensive operations, these units are fit for the preventive occupation of areas and points of particular importance, as well as for the control of large areas (empty spaces and areas behind the front). As regards the operations for the defence of the territory, the mechanized units on VBC are able to perform tasks connected with interventions against landings, airlandings and

helicopter landings, with areal interdiction as well as with the defence of sensitive areas and points. Finally, in peace support operations, they can effectively carry out activities of patrol on demarcation lines, control of sensitive areas and points, defence of itineraries and delicate objectives.

Lagoonal units

The amphibious units' configuration is similar to that of the mechanized units on VCC, but they are also trained and equipped for operations mainly in the Venetian lagoon and, in prospect, as amphibious units.

They are fit for carrying out - besides the typical tasks of the mechanized units - operations for the control of the territory, particularly in swampy and coastal areas.

Armoured units

The armoured units include tank and armoured units, as well as those cavalry units with a comparable configuration on

armed armoured cars. They are distinguished by their specific attitude for manoeuvred and powerful intervention, by their potent antitank firepower and by a marked aptitude for operations against similar formations in movement.

The armoured units have markedly offensive characteristics, and can find their priority employment in high-intensity operations (war, regional conflict and, possibly, peace enforcement).

On the other hand, these units could find limitations in interventions against strongly organized defensive positions, and in protracted operational engagements.

Within the framework of peace support operations, the armoured units can carry out deterrent tasks and, if the situation deteriorates, develop powerful and decisive local interventions, become a reserve, contribute to the security frame.

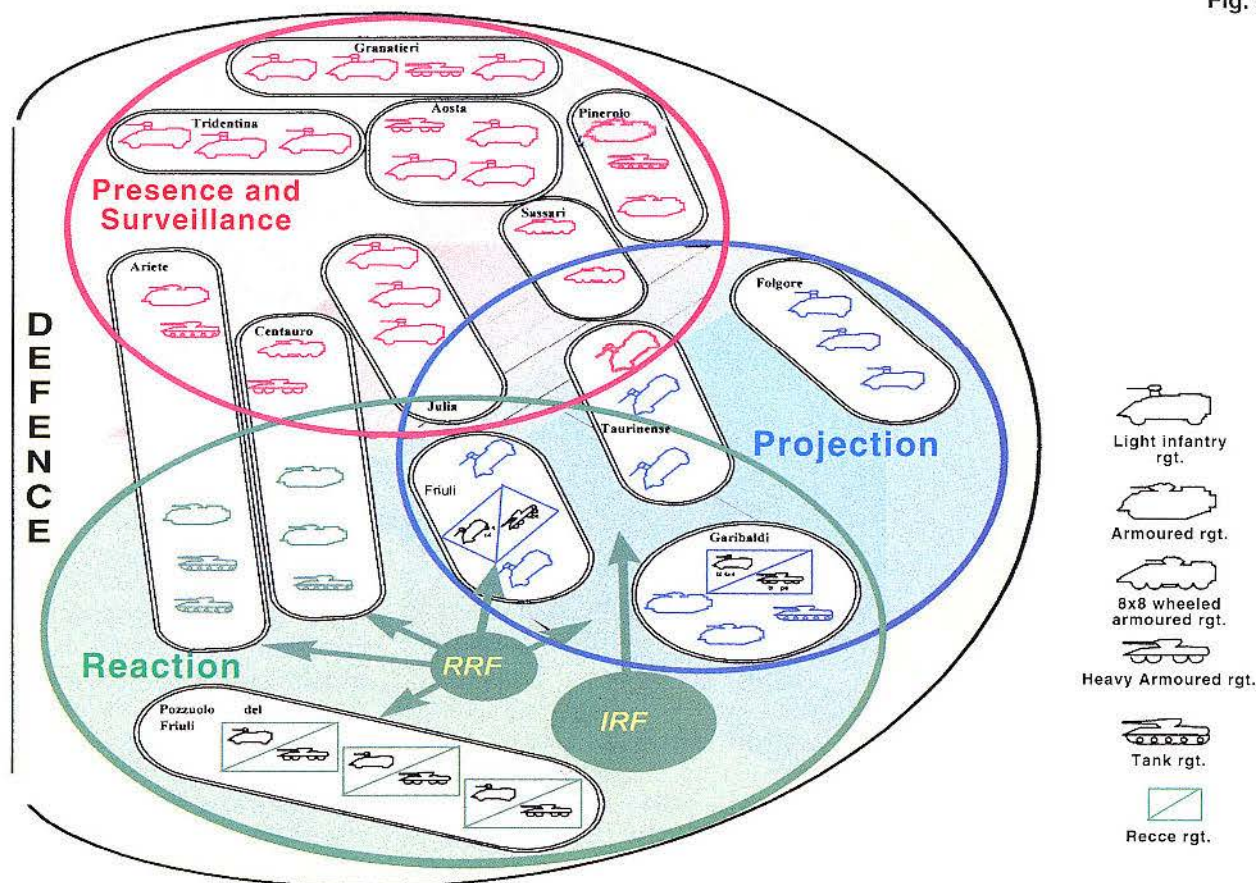
TYPES OF BASIC BRANCH UNITS IN THE "CAPABILITY PACKAGES"

The units (Infantry and Cavalry Regiments) to include in each capability package have been configured **in terms of number and types of Regiments, structure, composition, number and type of vehicles, arms and equipment, training** to envisage in relation to the operational capabilities to be achieved.

In this context, the main points for the definition of the types of units were:

- **subdivision of the forces into three complexes;**
- Projection, Reaction, Presence and Surveillance, which, as a whole, compose the Defence forces;
- need to envisage "multifunctional" units in order to meet both the requirements of direct defence of the Nation and the Alliance

Fig. 6



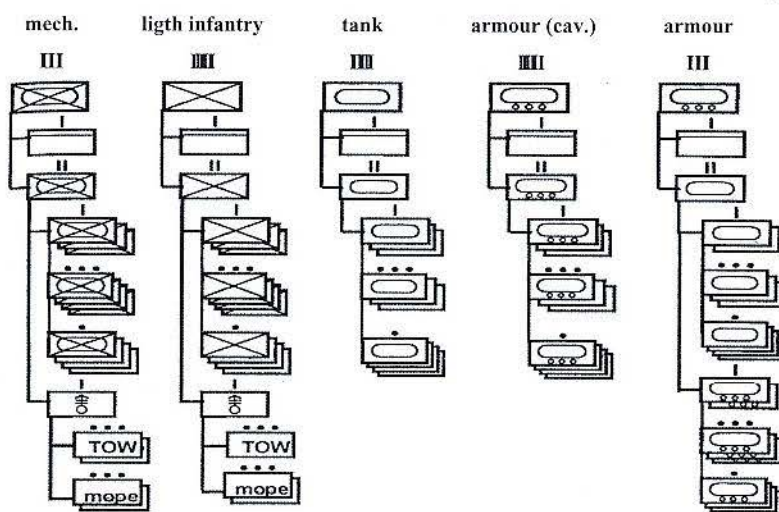
and those connected with peace support operations, at any rate in the perspective of the "economics of forces";

- capability of the Brigades to carry out autonomous tasks (therefore, availability - fixed or in case-by-case basis - of three Basic-Branch elements at Regiment level);
- compliance with the requirements set by the Alliance.

Based on the operational objectives of the Service (see table at facing page), it was ascertained that for the "Combat" function the operational land instrument will consist, as a general rule, of **21 Regiments of light infantry** (2 of which airmobile, and 3 paratroop), **9 Regiments of mechanized infantry** (1 lagoonal), **3 armoured infantry Regiments**, **6 tank Regiments**, **3 armoured cavalry**

ESTABLISHMENT OF BASIC BRANCH REGIMENTS

Fig. 7



Regiments on wheels and 1 armoured Regiment (5 more cavalry Regiments will be needed for recce and surveillance) (Fig.6).

The composition of the various Regiments is described at Fig.7.

It should be noted that the structure of the rifle companies of the mechanized and light infantry Regiments is "quaternary", both as regards the number of platoons and that of squads. As a matter of

CAPACITY PACKAGES: OBJECTIVES AND PRIORITIES

PACKAGES	OBJECTIVES	HQ & UNITS
1. PROJECTION FORCES	11. Capability of projecting a complete Brigade, integrated by tactical - logistic supports necessary to perform an autonomous task for short-term operations (equal to an operational cycle of 4-6 months) and with three elements of infantry regiment level. Capability of projecting an amphibious rgt in the framework of an amphibious Brigade. Capability of meeting the projection requirements of the EUFOR HQ	GARIBALDI BDE & SUPPORTS
	12. Capability of projecting a second Brigade, to guarantee the rotation of a Brigade in the Theatre, or to employ it together with the first one in case of a short-duration operation (operational cycle of 4-6 months)	FOLGORE BDE & SUPPORTS
	13. Capability of projecting - with no possibility of rotation a HQ at Division level and relevant supports, to assume command of the Force in multinational operations of limited size (e.g. ALBANIA). Or to assume command of an operational sector within a complex of multinational forces of higher level (e.g. the French Division in Bosnia).	FOP HQ & SUPPORTS
	14. Capability of projecting a third Brigade to guarantee the rotation of one of the two Brigades (obj 11 and 12) employed in an operational cycle of long duration (more than 6 months).	TAURINENSE BDE
	15. Capability of projecting a fourth Brigade, guaranteeing the rotation of both Brigades (obj. 11 and 12) employed in an operational cycle of long duration (more than 6 months). Give the Service on air-mobile capability for the conduct of operation in multinational and possibly national contexts, requiring timeliness of intervention and rapidity of execution, before the employment of other units, or in particular operational situations.	FRIULI BDE
	16. Capability of projecting a further Division-level HQ and the essential logistic supports, to guarantee the rotation of the in-Theatre Division HQ (see obj.13)	HQ ALPINE TROOPS & SUPPORTS
	17. Complete the iProjection Forces packages with all the other tactical-logistic elements necessary to perform its own operational functions in a complete manner	COMFOTER & SUPPORT
	18. Capability of projecting a further Brigade HQ to guarantee its rotation in operations of long duration	ARIETE BDE HQ REST 1 CP.T.
	GEN. -project a Division-level HQ and relevant supports and two Brigades in a single operational theatre or in two different theatres; OBJ. -ensure the rotation of the HQ and units in case of operations of long duration (operational cycle of more than 6 months)	
2. REACTION FORCES	21. Capability of providing one armoured Bde to the 3rd UK Division of ARRC, to integrate the two Bde already included in the Projection Forces (obj 11 and 15)	ARIETE BDE
	22. Capability of providing a Recce Brigade for the requirements of ARRC, as integration of the two Brigades included in the Projection Forces (obj 11 and 15) and the armoured Bde (obj 21)	POZZUOLO BDE
	23. Complete, with a 5th Bde, the capability of providing the ARRC the units that the Nation is committed to make available for the NATO Reaction Forces	CENTAURIO BDE
	24. Capability of providing expected supports to the It. 3rd Division of the ARRC	ARRC SUPPORTS
	25. Capability of ensuring to the Nation the availability of components for Defence of primary importance (it includes Units - e.g. A/A arty - not in the Reaction Package but in the Defence Package, but included in the former due to the peculiar functions to perform).	COMFOTER SUPPORTS & A/A ARTY
	GEN. - The package as a whole must give the Army the possibility to fulfil the commitments made by the Nation within NATO, in relation with the availability of 5 Brigades for ARRC and AMF(L). OBJ. - It must be taken into account that 2 of the 5 Brigades and the Cuneense Contingent for the AMF(L) are already included in the iProjection Forces.	
3. PRESENCE AND SURVEILLANCE FORCES	31. Capability of preparing a Bde for the needs of the Northern part of the Country, possibly able to participate in the establishment of a multinational Division/Brigade with units of neighbouring Countries.	JULIA BDE
	32. Capability of preparing an intermediate Command of Defence and relevant forces, able to meet the requirements of the Northern part of the Country.	1st FOD HQ & SUPPORTS
	33. Capability of preparing an intermediate Command of Defence able to manage the forces assigned for the requirements of Centre/South and Island	
	34. Capability of preparing a Bde for the requirements of Sicily, in particular to conduct operations in cooperation with the Police Forces	AOSTA BDE
	35. Capability of preparing a Bde for the requirements of the Centre of the Nation, the Capital in particular	GRANATIERI BDE
	36. Capability of preparing a Bde for the requirements of the requirement of the South	PINEROLO BDE
	37. Capability to prepare another Bde in addition to the one already envisaged (obj 21) for the requirements of the North	TRIDENTINA BDE
	38. Capability of preparing a Bde for the requirements of Sardinia, and of completing the supports of the A.T.	SASSARI BDE & A.T. HQ SUPPORTS
	TOTAL The package as a whole must specifically ensure the defence of the national territory - which is a priority for the Projection and Reaction packages as well - and meet the requirements of cooperation for public order, the safeguard of public institutions and in case of disaster	
4. DEFENCE FORCES	41. Complete the Command organization for the Nation's defence, adding all the necessary elements not included in the other Packages.	HQ & UNITS
	GEN. As a whole, the Defence package includes all Commands and Operational Forces of the Army (including Projection, Reaction, Presence and Surveillance Packages). OBJ. The Defence elements not included in the other packages are included in this specific package.	



«Puma» armoured vehicle, in 4 x 4 version (left) and 6 x 6 (below)

- equip **all** companies with VM, and give to the Regiments **also** a protected transport capability - proportionate to the needs of a company - to be used on a case-by-case basis.
- **differentiate** the Regiments, from the qualitative point of view, in relation to the “capability package” they belong to, equipping the **Projection** ones with VM TK (VM with added protection) and VB L (for one company) and the **Presence and Surveillance** ones with VM T and VM P.

As concerns **arms and equipment**, today's technological evolution permits us to pursue both the protection of the soldier from the offences which characterize the modern operational scenarios and , at the same time, the performance of the task through the neutralization of the foreseeable threats. The relevant requirements have already been evaluated and defined within the modernization programmes under way.

The following paragraphs will

fact, the most recent lessons learned in PSOs have confirmed the need to be able to count on four “operational shifts”, at least for minor units (the French Regiment consists of 4 operational companies. In any case, shortly this subject will be examined in depth by the Army Staff, within a specific study on the “minimum modules” necessary to perform the relevant functions.

On the basis of the structure and composition of the Basic Branch units outlined above, **the number and type of vehicles** needed by the armoured, mechanized and tank Regiments in order to perform the “Combat” function, appears to be:

- for the mechanized and wheeled armoured configuration, 60 VCC (the future DARDO) and 60 VBC8X8 (or similar vehicles) respectively;
- for the tank configuration, 44 tanks (Leopard or Ariete);
- for the armoured configuration, 29 tanks (Leopard or Ariete) and 29 “Centauro” armoured cars;
- for the armoured-cavalry configuration, 44 “Centauro” armoured cars.

As far as the **light infantry** units are concerned, they are, in a sense,

something new for our Army. About their configuration, it must be underlined that a Regiment-level unit is generally called to perform a unitary task. This means that the characteristics of its elements (companies) must be basically homogenous, ensuring, in any case, the availability of a number of protected vehicles.

The solution that best meets this basic requirement is that which envisages to:



give a general view of the programmes in progress.

For the protection of the soldier, the Army has started several programmes, aimed at increasing the individual passive and active protection, through the acquisition of:

- Kevlar helmets and new types of headpieces for the crews of armoured vehicles;
- bullet-proof and shrapnel-proof vests;
- night-vision sets.
- The programmes relevant to the production of materials for passive protection will presumably be completed by the end of 1998.
- In the sector of night vision, the acquisition of various materials for the units of the Basic Branch is under way. They are:
- monocular individual visors with light-intensifier (1 per squad);
- thermic infrared sets for medium-range vision (1 per platoon);
- thermic infrared sets for long-range vision (1 per company).

As for the **individual and crew arms**, after the adoption of the 5.56 mm calibre in replacement of the heavier 7.62 mm, the international



trend is now to adopt categories of weapons (individual arms for combat, for crews, and for personal defence) characterized by high performance, achieved through the development of the fire-control system, and the increase of the effects of the single hit on the target.

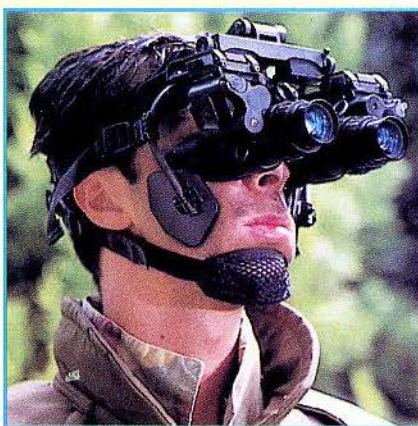
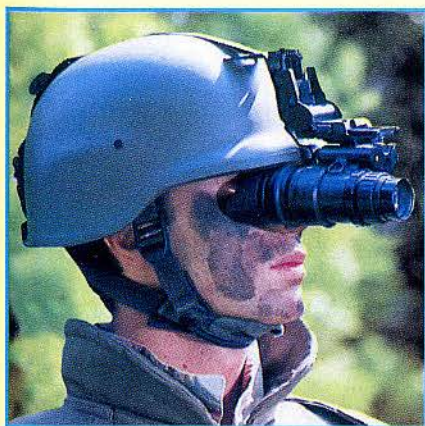
In this sector, the programme of the Army envisages:

- the modernization of the arms for self-defence, through the completion of the introduction into service of the Beretta pistol 92 FS, and the distribution to the units of the Franchi machine-pistol LF 57 SMAL RAF, destined to personnel with particular operational tasks;
- the unification of the calibre of portable arms, through the

completion of the introduction into service of the Beretta rifle 70/90-5.56mm, the acquisition of the Minimi LMG for the units of the Basic Branch and the transformation of part of the MG pool from 7.62mm to 5.56 mm for the other units;

- the allocation to each infantry and cavalry squad of a smooth-bore gun, fit also for the employment of special munitions, a 40 mm grenade-launcher attachable to the 70/90 rifle, and a day/night sighting system for portable arms;
- the replacement of the very old Garand M1 TS for sharpshooters with the precision rifle 338 calibre Lapua Magum (8.6 X 70),

Below, from left, monocular, visor with light - intensifier, binocular visor and thermic infrared set for long-range vision



which fulfils the modern operational requirements.

As for the **antitank weapons**, the range of materials now in service or being procured permits effective interventions at short, medium and long distances. In particular the short/very-short range requirements will be met by the "disposable" Panzerfaust 3 weapon system.

For medium/long ranges, the Service employs:

- TOW weapon system (basic) which will remain in service until the early post-2000 years; it will be joined by the TOW 2, mounted on Dardo VCCs and on A129 Mangusta helicopters, fit for launching the new TOW 2A and 2B with double hollow-charge in tandem.

The activities of research and development in this field aim mainly at improving the effectiveness of the warheads against reactive armour and at realizing "fire and forget" munitions, capable of hitting the enemy from above, under any condition of visibility and ECM jamming. The weapon system of the new generation should be introduced into service starting in 2005.

As far as the sets for night firing are concerned, the antitank situation is satisfactory as regards long and medium range systems, but still inadequate for the others. In particular:

- the TOW systems are all equipped with a thermic infrared visor (IRT); the acquisition programme of IRT systems, to equip also 50% of the Milan systems in service, is now almost completed;
- the Folgore system has a device for the illumination of the aiming grid, which permits to fire in poor visibility conditions (twilight/dawn), but not when there is no light at all (night);
- for the antitank system at short and very short range, several



sets realized by specialized firms are under study; nevertheless, it will be necessary to evaluate, in terms of cost-effectiveness, the convenience to equip with these costly devices the "disposable" systems, which will go into service in considerable numbers (approximately 13,000).

As for **mortars**, at present the Brandt 63, 120 mm calibre, smooth-bore, is in service. These weapons are not fit for the employment of the new types of

*Panzerfaust 3 A/T rocket launcher
Below: 60mm mortar on VCC
armoured combat vehicle*

ammunition, as those with terminal self-guidance or long-range with maximum charges; the convenience of modifying or replacing the material now in service is therefore being considered, in order to have weapons suitable for the modern operational scenarios.

As regards the firing procedures of the mortar units, an automation system is now under study. It is





«Dardo» tracked combat vehicle

integrable with CATRIN (SORAO) and with SIACCON, and will automate their functions.

In order to enable the Basic Branch to avail itself of weapons capable of operating against targets at medium ranges, the acquisition of 60 mm mortars is now under way:

- "Commando" type for Alpine troops and Paratroops;
- "B" type, employable both from the ground and VCC, for the remaining infantry and cavalry units.

The Simulation Systems, more and more important for training, deserve a specific mention. According to the NATO classification, the simulation systems are divided, in relation with the users, into three levels:

- first level: individual-type simulators, as those for training with portable and A/T weapons, pilot and flight training simulators;
- second level: tactical training systems, for units at platoon,

company and battalion level;

- third level: training systems for Commands and Staffs.

The systems of greater interest for Basic Branch units are the firing, piloting and mission simulators, i.e. those of the first and second level.

The most common firing simulators for portable arms (first level), also employed by the other Services, include:

- complex systems, concerning particularly instinctive firing in different scenarios, such as FATS (Fire Arms Training System), in service at the Infantry School;
- more simple systems, for basic training, with fixed or appearing/disappearing targets, with the indication of the firing results. Microfox and TTS (Training Target System) are now being distributed:

The **A/T firing simulators** are specific for the weapon systems:

- M70 simulators for TOW;
- DX 143 simulators for Milan;
- undercaliber systems for fire training with **Folgore** rocket launchers;
- undercaliber systems for fire training with **Panzerfaust 3**.

As far as the **armoured vehicles** are concerned, there are **driving and firing** simulators, as well as more complex systems, such as the **mission** ones, which involve the entire crew, and are able to simulate every phase of the operational employment of the vehicle in any scenario.

For the "Centauro" armoured cars, there are interactive systems, which prove to be very effective training aids for operators and maintainers. In a sense, they can be compared to simulation systems, in that they offer a wide range of employment options.

As regards the second-level simulators for the Basic Branch, the most effective ones are the MILES (multiple systems for integrated laser simulation). The first-generation MILES consist of platoon "packages" devised for:

- vehicles (tanks, VCC, VBC, armoured cars);
- personnel.

The second-generation MILES are characterized by marked flexibility of employment, since they permit the interaction of forces armed with the entire range of weapons in service with the infantry

units. Therefore they require specific environments, structures and specialized personnel.

From what has been described, it is clear that simulation is taking on a more and more qualifying role in the preparation of soldiers, units and staffs. On the other hand the simulation systems, which offer the best guarantees, employ valuable technologies, and therefore entail very high installation and running costs. In this perspective, the allocation of so precious resources is one of the success factors for their rational and effective employment.

In substance, the issue is to find the acquisition and distribution system which, in line with the enunciated principles, permits to optimize the use of the resources that, as we have said, become more and more precious, being sophisticated and costly.

The criterion which seems to effectively meet these requirements is that of realizing a widespread distribution to the users of the most simple systems, concentrating the most complex ones in "simulation poles".

For the systems dedicated to the infantry weapons, the distribution can be realized by assigning:

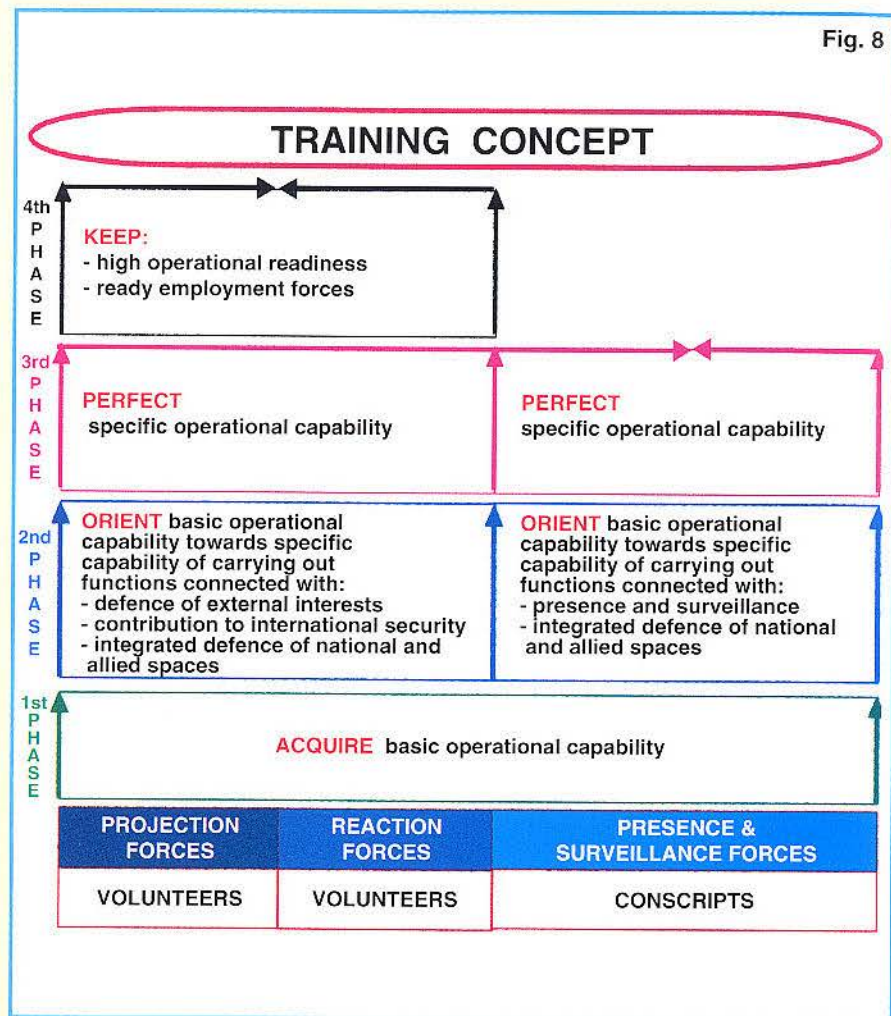
- Microfox, TTS and A/T systems to the Regiments;
- FATS, and other more sophisticated systems, to the Schools.

All other systems - including those for tanks and armoured cars - will be concentrated in "simulation poles".

Force Training

The diverse and wider range of the tasks entailed the division of the available forces into "**basic roles of employment**", which are made even more necessary by:

- transition from a system strongly conscription-oriented to a mixed system with a large component of volunteers;



- reduction of the conscription period;
- actual availability of financial resources and training equipment.

It became necessary, therefore, to prepare the instrument not only for hypothetical and extensive operations, but rather for real and diversified engagements, both on the national territory and abroad. In substance, we see **a new training concept, essentially based on the differentiation of the activities**, in relation with the "capability packages" in which the units are located as well as with the functions which, consequently, they will be called to perform.

It follows that the **training aims** for each "force package" (Projection, Reaction, Presence and Surveillance) **will be different and, above all, functional to the**

employment.

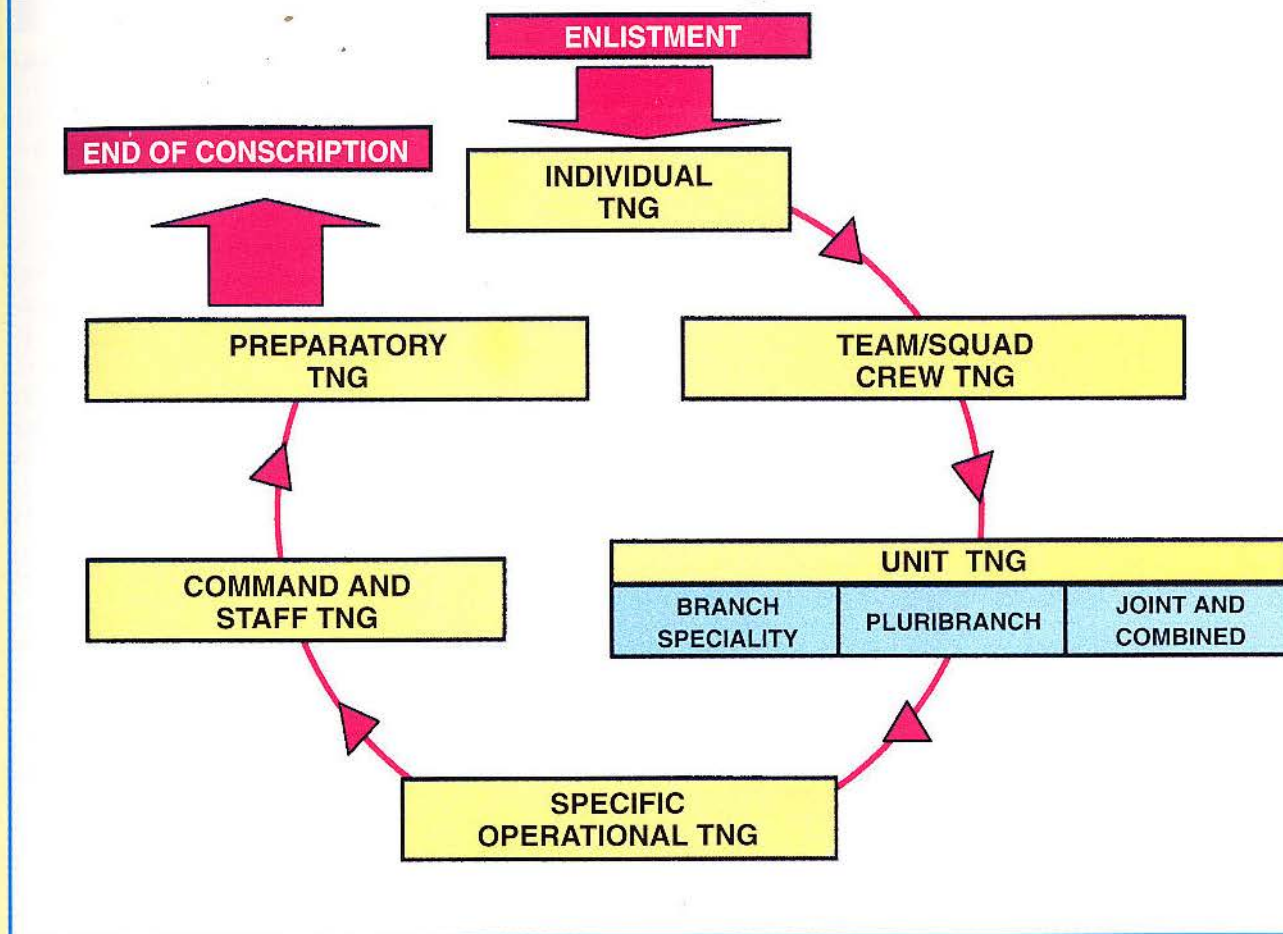
These aims translate into objectives to be achieved at successive times (Fig.8). Practically, the preparation of the units proceeds along a cycle (Fig.9) which:

- starts from the incorporation of forces "to be trained" into the units (platoon/company blocks of volunteer or conscript personnel);
- concerns Commands, Staffs and Troops;
- envisages, when necessary, preparatory training for employment in operations.

The length of the cycle is 10 months for the units manned by conscripts, 3 years for those incorporating short term volunteers.

In particular, as concerns the latter, the three-year cycle must

Fig. 9



envisage an "annual programme" of instructions and exercises essentially aimed at maintaining the units' operativeness and achieving further operational capabilities. The differentiation of the "annual programmes" must be achieved by training in different environments and operational scenarios, also abroad, changing the themes of the exercises as well as by using different ranges.

CONCLUSIONS

At the end of this review of the "Combat" function, it is deemed appropriate to underline two fundamental aspects. The first one is of a quantitative nature, i.e. it refers to the "size" of the combat component. Its dimensions have been determined on the basis of

the objectives, which, in their turn, stem from the role that the Nation must be able to play in the international context as well as from the peculiar requirements of the territory.

In this perspective, having worked according to the "lowest common multiple" principle, and envisaged "multifunctional" units, presumably the selected dimension is barely sufficient to ensure the performance of the function. The same is true for the second aspect - the "qualitative" one - considering that it was envisaged to acquire VMs (albeit in different versions) for most of the light infantry, instead of the more effective (but much costlier) VBLs, trying to reconcile the operational requirements of the Service with the resources foreseeably available for

modernization in the coming years, taking also into account the needs of all the other functional sectors.

As a consequence, it will be very difficult, for the Basic Branch, to go lower than the size determined and/or to proceed to further "qualitative reductions" without impairing its operational effectiveness.

Thus, every possible effort will have to be made in order to ensure the performance of this "master" function, at least in the terms described above.

**Brigadier General,
Chief, Office of the Army
Deputy Chief of Staff*

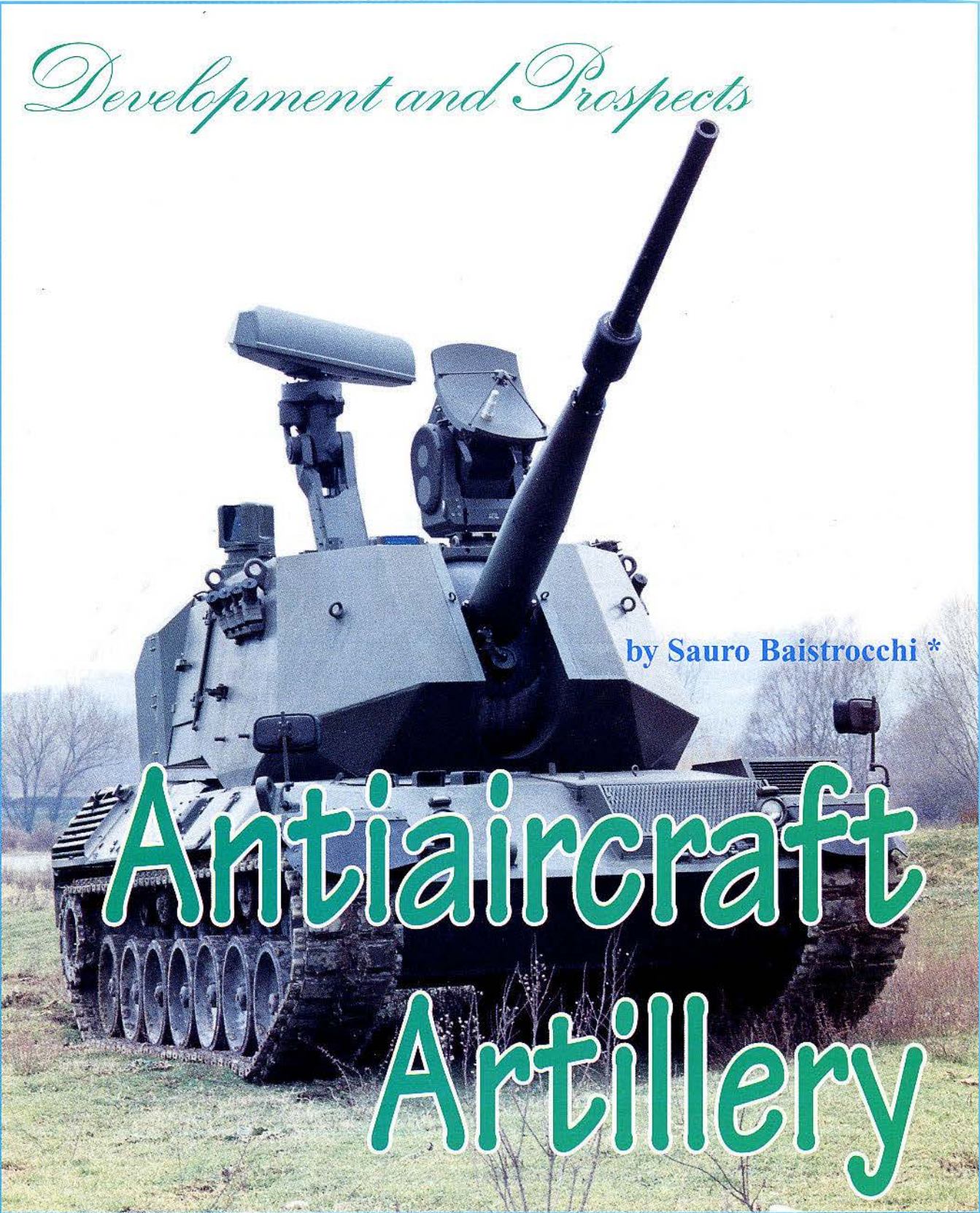
*** Lt. Colonel,
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Army General Staff*

ARMY PROJECT 2000

Development and Prospects

by Sauro Baistrocchi *

Antiaircraft Artillery



It wasn't his first peacekeeping operation. But after so much training and hard work he was eventually sitting at the console of the Tactical Control Officer of "cluster Italia". Outside, in the dark night of a Balkan January, the cold was biting and he wasn't sorry to carry out his surveillance tour of duty in the air-conditioned warmth of the Command shelter.

In the previous missions he had started from scratch with VSHORAD (1). It had been hard, but one of the first things he was told when he had chosen to be an anti-aircraft artilleryman was that no officer could qualify for the Areal System course without VSHORAD experience. Cold, heat, snow, rain, always outside to control the fire post, ear stuck to the radio, waiting for an order that never came. So much the better! On the other hand, the Captain had seemed very assured then, when, to his question during the explanation of the Rules of Engagement: "Sir, how do we tell if we won or lost?", he had answered with lapidary words: "It is very simple: if, at the end of our mission, we have not used our weapons, we can say we have won". That time they had been lucky: they had won.

Only after a few weeks, going back to the subject with some colleagues, the meaning, militarily paradoxical, of his Captain's words, which at the moment had perplexed him, appeared evident in all its concreteness.

The peacekeeper has no enemy to confront. He is a referee, a controller, an inspector; that the International Community has appointed to control the observance of an agreement, of a truce. The peacekeeper doesn't fight but is ready to fight; on the contrary, infringing the most elementary principles of secrecy of the traditional military doctrine, he must make a deterrent show of his operational capabilities, to



"Aspide" anti-aircraft missile system..

dissuade, discourage a priori any attempt to break the truce and trigger off a conflict escalation, just stopped by the international diplomacy. And if there is a violation, he must intervene, according to the Rules of Engagement, with all the necessary strength to be timely and effective vis-à-vis the subject that has broken the peace terms agreed upon. The purposes of the intervention are twofold, both fundamental for its success: first, to prevent the infringer from hitting the target; second, unequivocally identify him so that he may be subjected to the International Community's judgment.

The use of military force remains nevertheless a second-level option, a compelled choice, which indicates a situation of growing risk, but, above all, the potential failure of the basic course of action: deterrence. The peacekeeper failure can change from potential to actual if the intervention does not attain its goals or is carried out in an inappropriate manner.

That is why the Captain maintained that to really win in

peacekeeping one should not have fired a single shot.

Throwing an absentminded glance at the display, the Officer settled himself better in the comfortable ergonomical easy-chair of his work station.

That time they had been lucky: they had won.

Now he could realize how precarious and lacking had been the anti-aircraft capabilities deployed: a command and control system only partially automated and integrated into the multinational interforce organization of control and management of the peacekeeping force's air space; a peculiar technical-logistic system not yet adequately structured for operation outside the national borders; but, above all, the personnel, also within the Officer Cadres, not fully aware of the air risks and of the risk of employing anti-aircraft units in peacekeeping operations, owing to want of specific experience, then insufficient from the preparation viewpoint, and not only at national level.

But things had changed.

The Multinational Force of Intervention was in a position, through a complex, integrated surveillance system which

included anti-aircraft radar, to control, in real time when necessary, the actual deployment and the movements on the terrain and in the airspace of the military and paramilitary formations already involved in the crisis.

"Cluster Italia" was an integral and integrated part of the Control and Defence System of the in-Theatre Air Space. Placed to protect zones and points of high sensitiveness (Critical Areas), for the positive development of the pacification process, its specific task was to avoid that any form of offence could reach, through the airspace, the potential objectives. In substance, if not in form, the anti-aircraft defence was required to constantly guarantee an actual 100% effectiveness against any type of threat within the limits of its Critical Areas of responsibility.

THE SINGLE STRIKE STRATEGY

In the present strategic context, the operational problems like "cluster Italia's", are common to other aspects and sectors of employment of the military instrument, such as, for example, the elimination of human losses in operations.

The arising of these problems is encouraged by the growing global and globalizing force of public opinion, with which, often and correctly (because it represents it) political opinion aligns itself, but finds a foundation in the marked character of asymmetry with which today's potential or actual conflicts tend to present themselves, due to the undisputed military supremacy of the West after the end of the Cold War.

This is an operational problem (to achieve 100% effectiveness of the intervention or 0% of losses) lacking concrete, rigorous solutions, which we could define "of perfection". The operational solutions follow a trend, and are obtainable in terms of maximization of the capabilities

and therefore, potentially, of the results, within the bonds of the resources available.

Here we shall try, without any claim to completeness, to introduce the subject as premise and support of the concepts and structures of employment of the anti-aircraft artillery, as outlined in the study "The Capability Packages of the Italian Army".

We deemed it significant to tackle the "problem of anti-aircraft perfection" through the formulation of the "Single Strike Strategy" (2), because this approach is well suited to describe the conduct of the asymmetrical opponents involved in the "game" and the possible outcomes of the game itself.

As regards the asymmetry of the opponents, it must be said that the potential attacker, if considered according to the traditional techno-military standard of force-ratios, is characterized by an absolute qualitative and quantitative insignificance compared to the global capabilities of defence. The attack, not necessarily associated with conflicts in progress, does not have a massive character but a selective one (the single strike) and is carried out also with relatively "rudimentary" means, as compared with the state of the art, against an objective of particular importance. The possible success of the attack, independent of its material effects on the objective, assumes an exceptional significance for the repercussions it produces on the political and social plane, if only psychologically.

The risk that the anti-aircraft units must face is ambiguous and deceptive, not only for the technological characteristics of the risk itself (it is omnidirectional, difficult to identify, uses different carriers, employs weapons of mass destruction, etc.), but also for the nature of the attacking subject (State in hidden form,

terrorist group, political or ethnic faction, criminal organization etc.) which acts outside the bonds that influence the freedom of action of an institutional military force. Paradoxically, the danger is increased by the undisputed airspace supremacy of the friendly party, which boosts the disguising capabilities of the enemy carriers during the mission and raises the risk of a fratricidal downing.

Moreover, the range of the possible vulnerabilities (potential objectives of the attacker) in the various scenarios of employment is very wide.

If it is true that the "Single-Strike Strategy" is the one that seems to ensure the highest probabilities of success to a potential asymmetrical aggressor, it is equally true that the same strategy must be adopted by the attacked in defending himself, if he wants to optimize the efficiency of his resources in relation to the specific risk.

Before starting to examine the consequences of the "Single-Strike Strategy" on the anti-aircraft instrument, it remains to be said that the general scenario outlined here, despite being applicable also to conflict situations like the Gulf War, besides peacekeeping contexts, has an interpretative capability clearly limited in time. In keeping with the purpose of the "Capability Packages," this strategy is in fact aimed at supporting the best employment of the anti-aircraft resources available at short-medium term (1-5 years), in accordance with a pragmatic approach to the operational requirements that the service will presumably have to meet within the prospected time.

The present capabilities will then be connected with those of the future, on the basis of post-2010 scenarios already under close examination by the Army General Staff.

Within the outlined picture, the



Otomatic anti-aircraft system.

operational problem of anti-aircraft defence against attacks carried out across the air-space regards the national territory, the military formations employed in outward projections, the civilian and military sensitive points in Peace Support Operations (PSO), also of a conflictive nature.

The past necessity to face a massive threat in wartime and in a limited area of the national territory has been replaced by the need - at present and presumably in the near future - to confront the risk, much subtler and unforeseeable, of a single strike, in peacetime, along the entire peninsula and over its borders.

In quantitative terms, while yesterday, the anti-aircraft task consisted in imposing to the enemy air forces a certain ratio of wear (X% of effectiveness on many attacking units), now it is a matter of checking for sure a possible single carrier (100% of effectiveness) or a very limited number of attacking carriers.

Having no possibility, for

reasons of space, to run again through the detailed analysis made in this regard, it will be sufficient to sketch the logic of application of the outlined strategy by the subject that has to defend himself.

The single strike, just because it is single, is localized, i.e. it concerns physically a limited area. The problem consists in locating it in advance.

Obviously, it will never be possible to defend everything all the time. And if in an extreme hypothesis it were possible, the solution that would come out would be of a much lesser effectiveness (3) as compared with the possibility of concentrating the resources.

Secondly, the defence represents in itself only the last phase (ultima ratio) of the process. It is in fact a substantially reactive option, which implicitly accepts the enemy's initiative (a militarily paradoxical condition for a subject having force superiority) and in some way increases the possibility of success of the latter.

In that case, the best thing is to have recourse, as priority options,

to deterrence and prevention.

The single strike can be located and defused at the starting base, before it is launched. These are preventive interventions that are not the object of this work and, moreover, do not concern the anti-aircraft artillery.

Nevertheless, the latter can do a lot in terms of dissuasion, which is also a form of prevention - albeit an indirect one - through deterrence, giving a clear proof to the potential enemy not only that a possible attack on his part would have a very high probability of failure, but that he, being the attacker, would be undoubtedly identified and brought before the judgement of public opinion and of the International Community.

Deterrence depends on credibility and this, in its turn, is the result of a real operational capability.

The real operational capability, finally, enables the defender to set up an effective response if deterrence fails.

Thus we are back to the problem of the possibility of locating the single strike in view of the final defensive process.

The possible objectives and the relevant critical areas are detected through the analysis of the "friendly" vulnerabilities, in relation to the operational contingency in progress, i.e. to the goals of the mission. They are the elements of the military instrument, the local socio-economic-political organization, the territory and even the former belligerent factions, whose protection appears of vital importance for the success of the mission.

For instance, in a PSO aimed at the settlement of an internal conflict crisis, the objectives of the Single Strike Strategy could be the symbolic religious centres of one or the other faction, as well as the political centres.

In operations where there is a more traditional confrontation of military formations (i.e. the Gulf

War), the structure of the objectives to be defended will obviously be centred on the critical points of the friendly military instrument.

In any case, the single sensitive spots will constitute the gravitation centres of the anti-aircraft capability, which will have to ensure an integrated area-and-point coverage.

The integration of the points defended by the area-coverage permits to overcome, with relative ease, also the difficulties and discontinuities deriving from the possible non-linearity of the sector assigned, which is a distinctive feature of the present operations.

On the basis of the logic pointed out, the "Single Strike Strategy" expresses an anti-aircraft organizational concept for a dynamic accumulation of the capabilities, according to specific risk-maps, drawn according to the analysis of vulnerability.

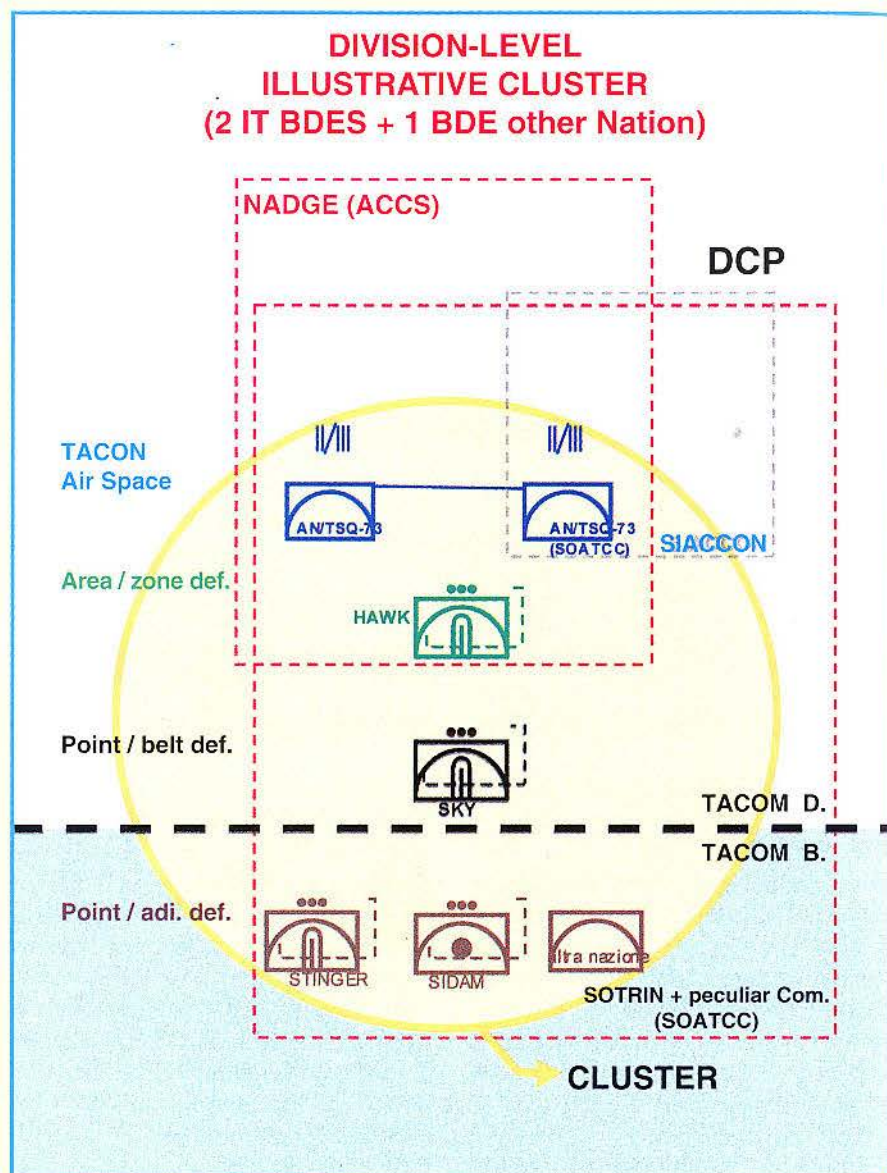
THE CLUSTER

This concept is called "cluster" meaning the aggregation-integration, by modules, of weapon systems with differentiated and complementary capabilities, able to synergically employ, from the viewpoint of effectiveness and support burdens, a single command-and-control and logistic back-up structure.

The "cluster" supplies an integrated anti-aircraft area-and-point coverage, in every direction, from very low to medium altitudes, which includes, if necessary, also anti-missile capabilities (when available).

An elementary module, generally at A/A-section level, is in a position to ensure a single anti-aircraft function (VSHORAD, SHORAD, medium-altitude defence, anti-missile point-defence).

Normally a cluster is closely integrated within the joint framework of Air Defence - although it can operate autonomously -



and can have a multinational composition.

Thanks to its intrinsic organizational and tactical flexibility, it seems to be the anti-aircraft complex instrument more suitable to confront emerging risk situations, typical of the "Single Strike Strategy", without prejudice to its value in the context of traditional symmetric-conflict situations, within which, besides, the concept has had historically its first formulation.

Organizationally, the cluster has the distinctive features of an anti-aircraft tactical artillery combat-group. Generally it is

part of land multiservice task forces at Brigade or Intermediate Operational Command (IOC) level, but can be employed also autonomously as a functional specialistic capability.

Also in traditional combat situations it permits, through an appropriate centralization/decentralization of the Tactical Command (TACOM) and Tactical Control (TACON) on the modules, to adapt the requirements of the Force Commander (elements to be defended, priorities, areas of deployment, etc.) to the necessity of assembling a unitary and flexible anti-aircraft system and guiding its

general gravitation also in the conduct phase.

Technically this is obtained through the connection, in a network of the constituting modules and the time-space coexistence of hierarchical (TACOM) and distributed (TACON) processes.

The cluster is in a position to operate (TACON) in centralized, decentralized and autonomous modes, within the framework of Integrated Air Defence, or autonomously.

It is directed by a single Commander, subordinate to the Commander of the land formation and responsible for the cluster's operation in all its aspects. In some operations, the cluster Commander, or his delegate, can assume if necessary - with specific limits of time and space - the tactical control of the entire cluster.

The table on the facing page illustrates the possible scheme of a cluster, pertinent to a multinational Intermediate Command (Division level: 2 Italian Brigades and 1 Brigade from another Nation) in out-of-area operations. The scheme supposes the existence of a system of airspace control and air defence integrated at joint level; nevertheless, all A/A units, including HAWKS, are employed in tasks of adherent defence.

The tactical command (TACOM) of the individual A/A units forming the cluster is entrusted to the respective Division/Brigade Commanders (Intermediate Command and Brigades).

The operational control (OPCON) and the tactical control (TACON) of the cluster, as well as the Air Space Management, are concentrated at ACA (ITAF) level, exercised however through the C2 organs of the Intermediate Command and possibly (within the limits of specific time and space restrictions) decentralized to the latter level (4).

Within this framework, the



"Aspide" towed antiaircraft missile system

Intermediate Command (DCP) avails itself, within the limits of the tasks received, of:

- the C3I unit, for the technical competences concerning OPCON (general plan of employment, areas of deployment) and the management of the air space (requests, plans, control);
- of the C3I unit and the BOC HAWK, for the tasks regarding TACON.

The A/A units which make up the cluster are organized, for the purposes of command and control and in particular for TACON, in a C3I hierarchical -areal network, defined each time on the basis of the tasks to be carried out and the units' deployment on the ground, and dynamically adapted to the developments of the situations.

The C3I unit and the BOC HAWK must be also considered as C2 centres reciprocally replaceable, capable of ensuring, among other things, the continuity of the

exercise of the essential functions entrusted to them during their movements.

AN ILLUSTRATIVE OPERATIONAL CONCEPT

It may be interesting to outline, by way of example, the basic scheme of an operational concept concerning a hypothetical antiaircraft component of an Army or multinational contingent employed in an "out-of-area" operation, marked by "traditional" conflicts, within the framework of a multinational formation. This scheme constitutes a general theoretical reference applicable, with the appropriate simplifying changes, also in case of operations on the national territory:

- the antiaircraft units, organically available and assigned, are organized from the tactical viewpoint (task organization) in a cluster, appropriately sized (for example, a BOC and a HAWK battery, a SKYGUARD battery and an adi. battery) for the protection of a land formation at Intermediate Command level

(maximum projectable formation) and the participation in the Theatre Air Defence. The overall availability of the A/A units guarantees the rotation of the forces, as a rule, every four months (3 shifts);

- the anti-aircraft defence is dynamically carried out, as a balanced area-and-point defence, without solution of continuity in time and space, from the Point of Entry (after disembarkation) to the Assembly Areas, the Areas of Operations and the Exit Points (up to the moment of embarkation) for the units' return to their respective Countries or garrisons.
- A/A forward detachments can be possibly redeployed in Theatre for the preventive activation of the defence of the Points of Entry;
- the A/A defence gravitates on the forces in movement and on the structures necessary for their transfer (railways roads, port and airport installations, depots, communication centres, etc.) during the phases of entry into, and exit from, the theatre area and the stops in the Assembly Areas. In these phases the land forces present their highest intrinsic vulnerability to the conventional and missile air-threat;
- during the operations, the gravitation of the defence is bent on the critical elements of the formations (Headquarters, Logistic Centres, Assembly Areas of the Operational Reserves, etc.) and on the infrastructural elements of the Theatre (lines of communication), within the Operations Area, where the manoeuvring units have a minimal intrinsic vulnerability to the air threat in all its forms.
- the deployment and the tasks of the components of the land-formation cluster are synergically coordinated and controlled (Tactical Control) within the Integrated Air Defence of the



"ASTER 30" anti-aircraft missile

Theatre, in view of optimizing its overall effectiveness, always taking into account the constraints connected with the employment for the direct protection of the Land force formations. Such components are employed according to the operational plans of the Land Commander, within the limits set by the Plan for Air Space Control and by the directives of the Commander of the Air Defence of the Theatre, which specify, both

in plans and in conduct, the circumstances and limitations within which the anti-aircraft units can start and/or continue the engagements.

Without prejudice to many of the aspects highlighted in the operational concept for Peace Support or, at any rate, asymmetrical operations, the anti-aircraft artillery will have to be employed, within the framework of the "Single Strike Strategy", with the primary purpose of preventing possible air attacks, convincing any potential adversary that any offensive attempt is destined to fail, and that the politico-psychological effects will inevitably turn against him, discrediting the party responsible for the attempt before the local and international public opinion.

Should the preventive activities fail, the cluster will be called to discriminate and intercept possible raiders, (aircraft and/or missiles) without collateral effects on the population and the friendly forces.

In any case the cluster will have to be able to identify the faction that promoted the attack, objectively documenting its responsibility.

All that considered, the employment of A/A units in PSO should conform to the following main principles:

- resolutely further the capabilities of surveillance (also at interservice level), air-space control and electronic war rather than fire interventions, by increasing the availability of radar and multiple identification systems as compared with launching vehicles and ammunition, which however will have to be at hand in a quantity sufficient to ensure the necessary deterrence;
- arrange the gravitation of the surveillance and launching systems according to the developments of the situation

EXAMPLES OF TIMES - MISSIONS - PRIORITIES OF THE ARMY A/A ARTILLERY

TYPE OF MISSION TIMES-PRIORITIES	ART.5 (RF & MDF) NATO-ITALY	ART.5 (RF) NATO	CONTROL OF TERRITORY	P S O	
				MULTINATIONAL	NATIONAL
Institutional role (growing from D to A)	A	B	C	C	D
Current role (growing from D to A)	D	C	B	A	A
Requirement (short, medium, long term)	long	medium	short	short	short
Warning	long	medium	short	short	short
Contemporaneity of missions	none	contr. of terr.	art. 5 RF/PSO	contr. of terr.	contr. of terr.
Duration	force exhaustion	months	months	months/years	months
Basic tasks	IAD NATO A/A ad. defence C3I	IAD NATO A/A ad.def. (poss.) C3I (poss.)	IAD C3I (poss.)	multin. IAD A/A ad. defence C3I	AD A/A ad. defence C3I
A/A components of packages	HAWK SKYguard	   	 (poss.)  (poss.)	 (rotation)  (rotation)	 (rotation)  (rotation)
	Stinger-Sidam adi	 (poss.) 	 (poss.)	 (rotation)  (rotation)	 (rotation)  (rotation)
	Category of deterrence readiness	H: very high SKy: medium SS: medium adi: medium	H: very high SKy: high SS: high adi: high	H: --- SKy: --- SS: --- adi: ---	H: --- SKy: --- SS: --- adi: ---
	Category of employment readiness	H: low SKy: low SS: low adi: low	H: low SKy: low SS: low adi: low	H: high SKy: medium SS: medium adi: medium	H: high SKy: high SS: high adi: high
General Planning priority	4	3	2	1	1

and of the critical stages of implementation of the peace plan, also in connection with the elements of information supplied at all levels, with which a constant link must be ensured, also through automated means;

- set up, employing every useful resource and especially interoperable automated C3I systems, a multinational, joint, centralized and integrated organization of command, control and management of the airspace;
- reduce to zero the risk of fratricidal downing by applying the abovesaid principles and using, in addition, restrictive and detailed rules of engagement (RoE), in order to control in advance every foreseeable contingent situation susceptible of producing unwanted consequences, and avoiding collateral effects in case of fire intervention;
- gravitate, with the logistic

support, on the maintenance activities, in order to keep the electronic equipment and generators in working order.

ROLE, MISSIONS AND FUNDAMENTAL TASKS OF THE ANTI-AIRCRAFT ARMY ARTILLERY.

After a rapid survey of the conceptual and tactical aspects of the employment of the A/A artillery in the first years of the next century, it is necessary to complete the overall picture with a mention of the role, missions and fundamental tasks institutionally entrusted to this special branch, in order to be able to configure its constitutive elements within the "Capability Packages of the Italian Army".

The institutional role of the Army A/A artillery component is to protect the Land Force's units during military operations on the national territory and outside its borders, against the air threat.

Its standard missions coincide with those of the national land instrument, art.5 NATO on Italian territory, art.5 NATO on Allied territory, control of the Italian territory, multinational and national peace-support operations):

In particular, the A/A artillery contributes to the missions of the military instrument, as a component of the national or NATO Air Defence System, or as an autonomous functional capability of the Italian Army, and is entrusted with the basic tasks of adherent A/A defence, contribution to the Integrated Air Defence (IAD) and anti-aircraft C3I, as specified below.

On the Italian territory:

- give a direct contribution, including if necessary the antimissile capability, to the national and NATO Integrated Air Defence (art. 5 and non-art. 5), a primary responsibility of

the Italian Air force, ensuring at the same time a prompt reconfiguration of the instrument and the protection of specific sensitive points or areas, also in the framework of control of the territory;

- ensure adherent A/A and possibly antimissile defence, within the Integrated Air Defence (art.5), of the Commands and forces of the Army (national formations, or multinational ones with an Italian Army component) engaged in operations.

Outside the national borders:

- ensure adherent A/A and possibly antimissile defence, within the ACE area or out-of-area (art. 5 and non-art. 5), of the Army forces (national formations or multinational ones with an Italian Army component), within NATO's Integrated Air Defence system or within the multinational Coalition (NATO, WEU, UN employments etc.), as well as autonomously (national employment abroad).

On the national territory and out of area:

- guarantee the operation of the C3I system (art. 5 and non-art. 5) of the A/A artillery in order to carry out the tasks listed above, ensuring its integration in operations with the C3I systems of the land and air forces or otherwise envisaging its autonomous operation.

THE A/A ARTILLERY CAPABILITY PACKAGES

The table that illustrates the missions, times and priorities of the Army's A/A artillery supplies a synthetic indication of the A/A component of the various Capability Packages, and permits moreover to interrelate the various quantitative and qualitative



variables that affect the complex sphere of employment of this special branch, in relation to the current scenarios.

Generally, for each option, the units, indicated according to their comprehensive availability, are considered employed in conformity with the organizational concept of the cluster.

The "Control of the Territory" and the art. 5 NATO missions correspond to the "Defence" and "Presence and Surveillance" Packages, the art. 5 RF (Reaction Forces) to the "Reaction" Package and the PSO mission to the "Projection" Package.

The different denomination adopted in the illustrative table has the purpose of highlighting the particular role of the A/A artillery within the various missions, permitting a more precise connection between missions and Packages.

In short, the organization of the A/A artillery includes the following functional elements:

- 1 Artillery Regiment of medium anti-aircraft HAWK missiles;

- 1 Artillery Regiment of light anti-aircraft SKYGUARD-ASPIDE missiles;
- 1 anti-aircraft Regiment of self-defence SIDAM and STINGER;
- C3I unit (SoATCC);
- RR section (repairs and supplies) for anti-aircraft materiel;
- self-defence anti-aircraft battery, at Brigade and Intermediate Command level.

The "Capability Packages-Anti-aircraft Artillery" Project, which has recently been activated in its executive phase, is aimed at correcting some shortcomings existing at present, but intends, in particular, to realize the basic cluster just described. It defines the capabilities, the structure and the functional mechanisms of each elementary typological module (individual weapon system, fire unit/section, interface arrangements etc.) and of the basic organization of the complex modules (C3I, peculiar logistics, general logistic and projection requirements, interface arrangements, etc.) as well as the relevant modes of realization, organizing them in conformity with

specific objectives progressively paced according to priority. In the Project's framework, the possible stages of activation of the cluster are established according to functional capabilities (weapon systems, C3I and logistics), also in relation to the possible scenarios of employment.

PERHAPS IT WAS A CRUISE MISSILE...

The brilliant dot on the monitor became more intense and roused him from his thoughts. It seemed almost to be moving.

"The usual clutter...(5) tiredly mused the Tactical Control Officer of cluster Italia, just an instant before the radar signal turned into a winking icon.

"Trace not identified. Start evaluation". The message of process-updating that pulsed silently on the computer display seemed deafening. He knew very well what it meant; in simulations he had seen several times the activation of this procedure. Now the trace would be transmitted to the Joint Control Centre and this would turn it to the pursuit systems of the first geometry of interception, the piloted interceptors of the Allied Air Force.

The second and third geometry of interception were instead within his province and regarded respectively the areal SAM systems and SHORAD point systems which were under his control, in his capacity of tactical controller of the cluster.

He knew very well what could have happened, but did not absolutely expect what actually happened.

The orders of the Control Centre bounced suddenly on his



console, in a motley of labels and ikons.

"Area Cluster Italia: hold fire released".

"Hostile trace assigned in fire in second geometry of interception".

He reacted automatically, the way he was trained to do. Instinctively he activated the fire-readiness procedure, made up of logical sequences of orders and actions, which to an outsider would have seemed frantic and uncontrollable, but that to him were flowing as in a slow motion, allowing him to appreciate the meaning of every step.

"Battle Station".

"SAM ready to fire".

"SHORAD ready to fire".

"Target hostile, acquired".

"Second geometry of interception not available".

"Third geometry of interception activated".

"Critical area 'Zulu': hold fire released".

"Fire Unit SHORAD 'Bravo': on fire.

Instants elapsed. Then, unexpectedly the roar reached him,

despite the shelter's soundproofing. A little later he could read the report on the display. It wasn't a Cruise missile, but an old, simple, "asymmetrical" drone, loaded with explosives, intercepted by Fire Unit SHORAD "Bravo" well within Critical Area "Zulu", the area of the residence of the newly elected President.

□

**Lt. Colonel
Section Chief, Plans Office
Army General Staff*

NOTES:

(1) VSHORAD: Very SHOrt Range Air Defence.

(2) Expression of original authorship, at least until somebody else lays claim to it.

(3) Critical aspect in the problems of perfection.

(4) The decentralization of a responsibility to subordinate bodies implies a delegation of authority, while the exercise of the responsibility through the same subordinate bodies does not presuppose any delegation.

(5) Electronic background noise.

ARMY PROJECT 2000



THE ENGINEER CORPS

by Ivan Felice Resce * and Mario Ruggiero **

The analysis of the modern operational scenarios and of the foreseeable short and medium term ones, tends to confirm the frequency of the engagement in operations other than war (OOTW), and particularly in peace support operations.

On the far-away horizon (more than 10 years) the concrete engagement will in the preventive and remote management of crisis situations continue, as a primary assumption, but also operational

engagements of greater intensity cannot be excluded, comprising those in traditional types of conflict against adversaries with capabilities substantially equal to those attainable by the national military instrument. Specific in-depth studies, carried out also in international environments, tend to qualify the present scenarios and, even more, the predictable future ones, on the basis of three distinctive characters: uncertainty, complexity, sensitiveness; these

characters permit to determine, although in general terms, the challenges that the Army will have to confront in the future and therefore the operational capabilities it has to achieve. In this perspective, operational versatility seems to be the key of the competitive advantage over the assumed adversary and therefore of success in operations. Among the facts that concur to achieve such versatility, one must list the professionalism of the personnel,

the technological improvements of the existing capabilities and of the ones that will foreseeably be developed.

As for the combat support operational function, and particularly the operational tasks of the Engineers, the new scenarios confirm, as fundamental fields of employment, those connected with the mobility of one's own forces, the countermobility against the enemy forces, the protection and general support of Commands and units.

As regards peace support operations (PSO), to the mentioned activities, which have always distinguished the employment of the Engineers, new duties have been added, which are part of the "utility repairs" category, generally developed in the ambit of civilian-military operations (CMO), in direct support of the mission entrusted to the force of intervention.

In addition, the Engineers constitute the most valuable component for interventions in case of calamities, within "presence and surveillance" missions. On the other hand, it cannot be excluded that these essentially technical interventions could also concern not only the national territory but also external theatres.

Here, contrary to what was pointed out in articles published by "Rivista Militare" and related to other operational functions, we do not propose a classification of tasks connected with the different types of operations because, from the execution angle, there are remarkable similarities between the various conditions of employment, even if it is appropriate to also stress the differences of attitude and behaviour which must distinguish the approach to the operational contexts.

It seems more productive, instead, to examine in detail the activities deriving from general tasks, to emphasize the new emerging elements, which compel to verify both the structures and



the procedures of employment of the Engineers.

The Engineers of the IFOR Italian Contingent at work to restore road practicability.

MOBILITY

The manoeuvre forces must have and adequate freedom of action in the operational theatre, in order to obtain both the concentration of the efforts and a rapid deployment, as well as the break of contact. The freedom of movement and, more generally, the movement capability can make up for the possible quantitative inferiority of the instrument.

Mobility constitutes an intrinsic capability of the units and is granted by the kind of vehicles that equip them. But, prescinding from the unit's capabilities, the terrain, the enemy forces and the weather conditions are elements that influence mobility in the zone of operation. The activity in favour of mobility, typical of the Engineers, should be considered in this perspective. Its effectiveness is closely correlated with the:

- knowledge of the various types of obstacles that can be encountered;
- type of deployment/tactical

organization of the Engineer units;

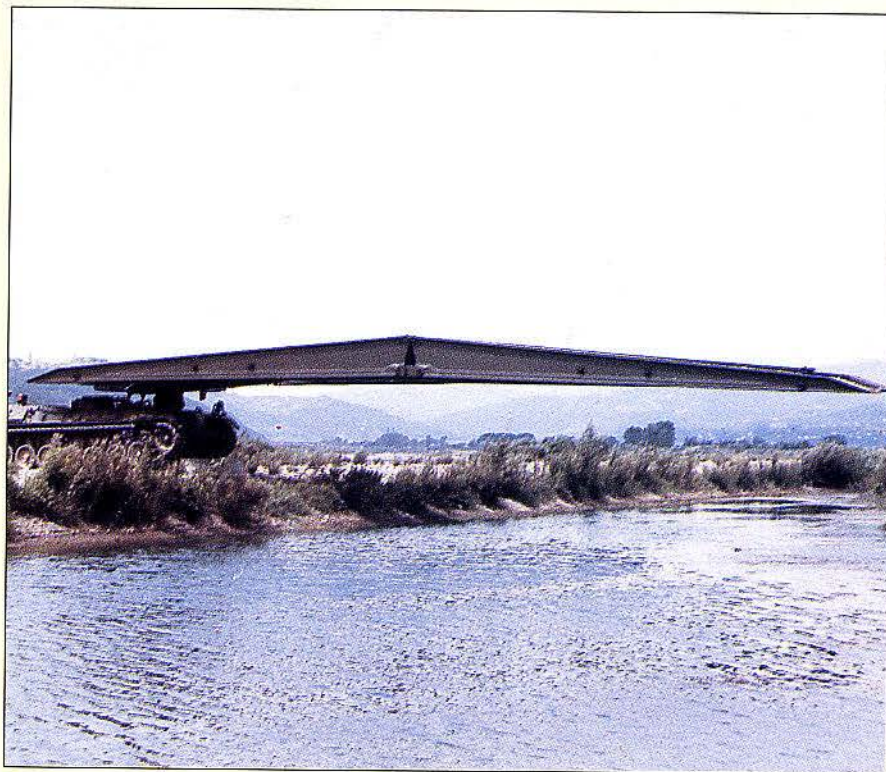
- timely updating of the situation chart with specific reference to obstacles;
- availability of effective means and employment procedures.

In short, mobility is maintained through the activities listed below.

Overcoming of interruptions

It is an activity which assumes different characteristics whether it is in favour of the operational units or of logistic support.

In the first instance, the timeliness of the intervention is more important than the accuracy of the realization, also because the vehicles involved in overcoming interruptions have a high off-road mobility. As a rule, therefore, the activity is limited to bypassing the interruption itself using power shovels etc. In case of necessity, the overcoming is achieved with the



Bridge-throwing vehicle derived from a "Leopard" tank, equipped with a two-girder bridge.

employment of bridge-throwing tanks or light-alloy bridges. To repair interruptions that facilitate the logistic support requires instead more weighty and qualified technical interventions and therefore bridging materials which permit to obtain structures of adequate length and capacity in relation, respectively, to the interruption and to the vehicles that have to go over them.

Crossing of unfordable watercourses

It is an activity which is carried out with the employment of bridging materials (which are part of the regular equipment) set on floating supports. The Pontooners are equipped with the most modern and qualifying materials in the specific sector; the Pontooners are a special branch mainly destined to ensure the practicability across the great national watercourses, the Po river first of all. The interventions are characterized by marked technical features, because they normally take place far from

concrete and direct threats.

In modern scenarios, the projection of national contingents in "out of area" theatres in Peace Support operations, also in geographical regions crossed by unfordable watercourses, may require a contribution of operational capabilities also in that specific sector. But a possible intervention would be anything but safe. The watercourse would not be known as the Po and the other national rivers, while the river-beds and the banks could be mined.

In view of this, the unit will have to be reconfigured according to specialistic capabilities, with structure, operational characteristics and culture updated according to the new reality.

Operations against obstacles

It is one of the traditional activities of the Engineer units, and of the sappers' first of all, which are directed primarily against mined obstacles. They take shape traditionally in survey and breaching. These terms refer

essentially to a classic scenario with a continuous, mined and somehow schematic obstacle. The breaching envisages ample recourse to normal or self-propelled explosive material, without limitations as regards possible collateral damage. It is very unlikely that a scenario like the one summarily described will materialize in the near future, even if it cannot be totally excluded in a longer-term prospect. The mined obstacle which can be encountered in modern operational theatres is more unpredictable, has no rules, is more difficult to locate, is spread also through inhabited and built-up areas; it is decidedly more misleading due to an ample recourse to trapping and improvisation. Therefore it cannot be overcome with traditional methods, but rather with systematic clearing, to be accomplished by highly specialized personnel, provided with automated materials and equipment. The most frequent task in PSO is generally connected with route clearance for the transit of units or humanitarian convoys.

Maintenance of road practicability

This is another traditional activity, which entails monitoring of the road conditions, preparation of bypasses around the most critical structures (to be activated in case of demolition), improvement of the road-network and its constant maintenance.

The activity needs units equipped with a range of means differentiated as regards power and characteristics, in order to graduate the interventions in accordance with situation and

*Convoy of Railway Engineers
employed for the restoration of
railways and yards.*

urgency. On the national territory, these requirements could also be met with the help of civilian organizations.

**Preparation, repair and
management of railroads and
yards.**

The necessity to participate in the maintenance/development of railway networks is taking a new shape, no more limited to national contingencies but extended also to out-of-area operations. Within this scope, besides, it constitutes an activity of great visibility and effect, which can have a remarkable weight on the mission as a whole. The scenario of employment changes a lot if compared with the traditional one. From a relatively safe condition, which characterizes the national environment, one goes on to a situation that may present concrete risks, deriving from the strifes existing in theatre. In this perspective, the intervention in the specific sector keeps its technical aspects but assumes a decidedly more tactical character.

The Engineer Units, moreover, supply a well-qualified support to the updating of the cartographic assets concerning roads practicability.

COUNTERMOBILITY

The activities connected with countermobility have the purpose of hindering the manoeuvre of the enemy, limiting its freedom of action.

They refer almost exclusively to traditional conflicts and take shape in the building of obstacles that can be grouped in the



following categories:

- active obstacle;
- demolitions;
- passive obstacles.

In modern scenarios, also in the asymmetric ones, countermobility must be almost entirely reconsidered, in view of the culture prevailing especially in Western societies, which demands respect for life, environment, goods.

As regards the active obstacle, one should consider the banishment of inhuman weapons, including antipersonnel mines, to which Italy has given its assent preparing a law that goes beyond the Ottawa provisions, which limit the prohibition only to magnetically undetectable antipersonnel mines.

The mined obstacle must therefore be redesigned on the conceptual plane more than on the technical one. Studies and debates in progress, both at national and international level, have not yet produced concrete reference elements. It is certain that the active obstacle of the future will have to be directed only against on-vehicle mobility,

and must be planned envisaging its simple and safe disposal once it has performed its function.

These two elements are sufficient evidence of the cultural change that must be made, considering that generations of military have planned minefields and have been trained to lay them, trying to confer them maximum hindering power, through non-detectability, trapping, etc.

As for demolitions, it must be pointed out that the delaying plans conceived for the defence of the northeastern region of the Peninsula are no more conceivable in a possible conflict, unless vital national interests are at risk. In any case, demolitions must be carried out according to selective principles, basing their efficacy on timeliness, accuracy and integration within the manoeuvre rather than in the number of interruptions.

The passive obstacle represents a component of countermobility which can balance the lesser effectiveness of active obstacles and demolitions, employing technologies applied to explosive



"Mattei" engine-compressor.

- systems for finding, purifying and supplying water;
- production and supply of low-voltage electric power;
- POL pipelines of limited length and capacity.

These are activities that entail a large availability of skilled personnel and high-technology equipment and materials. On the other hand, most activities concern the personnel. In view of this, it is necessary to ensure the observance of precise accident-prevention laws which are directly under the Commanders' and the technicians' responsibility. In substance, also in this sphere, one goes from a "field" environment, in which before the main purpose was to ensure an exclusively operational functionality, to an environment where the technical contents become preminent. Besides, there is a side that should not be overlooked, i.e. that of the operators' security. The employment of the Engineers in conflict situations of asymmetric character, in which the enemy is not clearly identified and all the parties present in the zone of operations represent a possible threat, requires that the Engineers' means be of the protected type.

The deployment-support sector is one where the Engineers are unable to meet entirely the range of possible needs. Considering this, it is often necessary or useful to have recourse to civilian resources. The implementation procedures of these provisions, including the possible conventions with public or private organizations or agencies, must be defined in advance both on the conceptual and on the organizational plane.

Utility Repairs and Disaster Relief

It is a range of activities

materials of limited environmental impact' and, especially, to non-lethal weapons.

PROTECTION

The activities concerning protection are addressed mainly to personnel, Commands, transmission centres and, as a second priority, to arms and materials.

Especially in symmetric conflicts, protection normally includes deceiving measures.

Protection must be pursued, first of all, through measures and provisions adopted by the interested parties, who have the responsibility to safeguard their own survival.

In view of this, the Engineers will give their contribution, within the limits of the resources and priorities defined by the Commanders at the various organizational levels. The contribution, however, will have to be concentrated on the activities that require particular means and equipments, letting the other Services carry out the remaining activities. To sum it all

up, the activities of the Engineers in the sector of protection are:

- planning and realization of field fortifications; this activity is of particular value in setting up checkpoints and Cps/collective works in peacekeeping operations;
- realization of collective structures;
- assistance in concealment, camouflage and deceit;
- refitting of buildings destined to sheltered defensive structures.

In case of protracted operations, the interventions of the Engineer Corps can continue, in order to add comfort to mere protection.

DEPLOYMENT SUPPORT

The deployment support includes every activity destined to build the structures and to employ the equipment necessary to support in-theatre military operations. In this perspective, the activities concern:

- logistic infrastructure, logistic and techno-tactical road practicability;
- port-and airport-infrastructure of special interest for the Force of intervention;

Field drilling unit.

comprised within those already described; the changes are only in purposes, circumstances and, consequently, in development procedures. Procedures that will have to be studied in depth at School and unit level.

THE ENGINEER CORPS IN OPERATIONS

The employment of the Engineers, both in traditional and in other-than-war operations, is oriented toward the development of the same basic missions: mobility, countermobility, protection and support of the deployment. The activities that are included in civil-military operations (Utility Repairs) and in those in assistance to the populations in case of calamities (Disaster Relief) are, in substance, assimilable to the preceding ones. The executive procedures are distinguished essentially for the presence of a concrete threat and the timeliness of the intervention requested.

The fundamental principles that should motivate the employment of the Engineers - principles strictly correlated with operational economy and versatility - are listed below:

Task Force

The varied range of activities that normally distinguish the employment of the Engineers in modern operations and the need to assemble the forces according to standards of absolute economy demand that also the Engineers component should operate according to the principle of a task force.

The application of this principle requires the preliminary definition of the modules that characterize the specialistic capabilities necessary to



compose the task force, referring to both the elementary module (squad and/or team) and to the unit of employment, which can be identified with a platoon or company, according to the speciality.

Intervention Priority

The bulk of requirements to be met, besides, makes it necessary to define the priority that should be given to each need. The definition of the priorities is a specific task of the Commanders, but "the Engineer" is a qualified adviser to help in producing them.

Integration with the manoeuvre

The Engineer Corps contributes, as we said, to the "combat support" function. In this perspective, its activities must be completely integrated with the manoeuvre of the forces and the manoeuvre of fire. Usually these activities require relatively long times of execution, if compared with the timeliness of intervention

needed in some phases of the operation. The effectiveness of the interventions therefore must be pursued by starting in advance, whenever possible, the activities of the Engineers vis-à-vis the other functional components.

Adherence of the Logistic Support

The accomplishment of the tasks entrusted to the Engineers can have a very high logistic impact because, as a rule, they must move and have at their disposal, large quantities of materials.

Comprehensiveness of Command and Control

The Engineer units normally operate in very wide spaces of the operation zone. Therefore it is indispensable for the C2 structure to ensure continuity to the flow of information, both vertical and horizontal, so that the activities of Command, and especially those of Control, do not suffer solutions of continuity.



Pioneer tank on "Leopard" hull, equipped for the Engineers' actions on the battlefield.

- units which operate to assist the operation's development as a whole and perform tasks connected with general support.

The direct support concerns units structured, equipped and trained to operate in "risk" areas, both in traditional-war and peace-support operations. Besides, their action must be marked by timeliness and, in some circumstances, by boldness.

The units we refer to are the Sappers which, in prospect, will see their characters of prevaingly tactical contents emphasized, because they will have equipments marked by high mobility, good protection - including earth moving equipment - and immediate employment.

The Engineer component for General Support is more complex and differentiated. The traditional specialities belonging to this category are constituted by Pioneers, Railway Engineers and Pontooners.

The Pioneers are the speciality that encloses the most varied range of tasks: from logistic road-

Recourse to local resources

The normal scarcity of possibilities as compared with the needs, compels to have ample recourse to local resources.

The Operational Capabilities of the Engineer Corps.

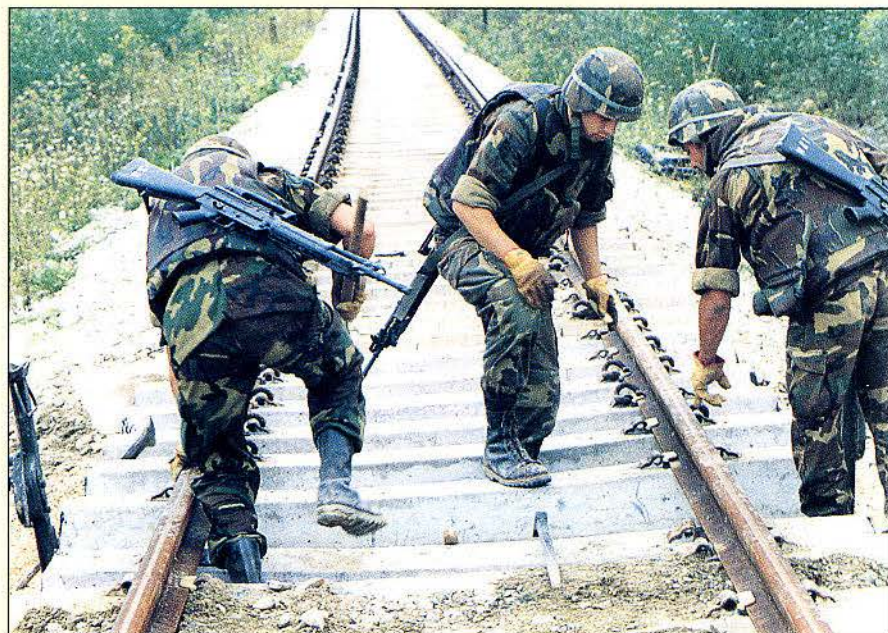
The type of Engineer units destined to carry out the missions entrusted to them derives from the following two factors:

- belt of the operation zone within which the units are called to operate;
- level of specialization required for the accomplishment of the tasks.

On the basis of these two factors, there is a first difference

emerging:

- units which operate inside the manoeuvre - and therefore in close contact with the combat units-which have essentially tasks of adherence or direct support;



Italian soldiers of the IFOR contingent repairing railway tracks on Bosnian territory.

Engineer NCO engaged in an operation of mine-clearing and removal of explosive ordnance in former Yugoslavia.

practicability to obstacles, from infrastructural interventions to assistance in case of disasters. In addition to these traditional tasks, there are today also those connected with finding, producing and supplying water and electric power, with the ensuing acquisition of not too-complicated machinery and equipment which, nevertheless, need specific know-how and adequate logistic support. These materials are supplied to almost all units but prospectively it would seem more appropriate to centralize them to ensure their effective maintenance and employment. The interventions required of the Engineers, with ever increasing frequency, on structures for troop quarters, ports and airports are, from a certain point of view, a new aspect of their activity. Also in this case particular technical skills are necessary.

In view of this, it could be suitable to reconfigure one of the two Pioneer Projection Regiments with two battalions, the first charged with finding producing and supplying water and power resources and the second with the repair and maintenance of routes and infrastructure.

The railway-engineers component - destined to the construction/repair and management of rail-infrastructure and railways - answers effectively both the national and "out-of-area" needs. Possible modest adaptations could regard the procurement of field material for building temporary railway stations and for the rapid repair of damaged lines.

The Pontooner speciality requires a more marked reconfiguration, due both to stock modernization (it is going from Class 60 to PFM,



which entails a reexamination of its organic composition) and, above all, because the ways of crossing unfordable watercourses have changed a great deal.

The possibility to have to operate in critical situations deriving from environmental (landslides, floods etc.) or artificial (mined river banks or beds) conditions is anything but remote. With a view to this, this special branch will have to acquire a more marked operational character, with autonomous capabilities in the areas of watercourse reconnaissance and clearing and in the organization and management of the concerned areas. This is going to be obtained through both a different composition of the unit and the attribution of specific capabilities, first of all the one regarding watercourse-bed reconnaissance and mine-clearing.

EXPLOSIVE ORDNANCE DISPOSAL

The explosive ordnance disposal

capability was almost spontaneously obtained by the "Engineer-pole" as a result of their employment in "expert" groups, practically in every operational theatre concerned with more-or-less bloody war events.

Today the Army prides itself on an almost unique experience, which is decidedly among the excellent ones, and proves very precious in modern scenarios, not only because of its essential support to the national contingent, but also for its contribution to the preparation and training of local personnel employed for the clearance of mined areas. Besides this capability, which is called operational because is closely connected with operations, in the course of time the Army has also developed the one aimed at clearing the national territory of explosive devices that go back to the past conflicts. For land-mine-clearing there are at present two organizations:

- one under the Direction of the

Table 1		
NATO SPECIFICATIONS	PROPOSED PATENT	ACTIVITIES
Explosive Ordnance Reconnaissance	EOR	Reconnaissance and exposure of ordnance
Explosive Ordnance Disposal	EOD 1° livello	Disposal of known regulation-ordnance
	EOD 2° livello	Disposal of all-type regulation-ordnance
	EOD 3° livello	Disposal of special-charge, all-type regulation-ordnance
IED - Improvised Explosive Device	IED	Disposal of occasional or improvised devices
SUB	SUB	Underwater operations
IC - Incident Commander	IC	Directive tasks for solution of "EOD incidents"

Table 2		
EOR - Explosive Ordnance Reconnaissance	EOR	BOE personnel of the projection and reaction Engineer units
EOD - Explosive Ordnance Disposal	EOD 1° livello	All blasters of the Service units
	EOD 2° livello	BOE teams of the Engineer units
	EOD 3° livello	Teams of NBC Regiments
IED - Improvised Explosive Device	IED	BOE teams of the Engineer units of the projection and reaction forces
SUB	SUB	Recce teams of Pontoneer Regiment
IC - Incident Commander	IC	Engineer Officers of the projection units

Engineer Corps, charged with removal/disposal of mines and buried devices;

- the other, under CERIMANT, charged with removal/disposal of devices other than mines.

This organization, functional to the necessities of the second post-war period, owing to the massive presence of explosive devices on the national territory, appears redundant as compared with the Army's present needs. In consequence of the abovesaid considerations, the Army's sector relevant to the disposal of explosive devices must be reorganized according to the following principles:

- economy in of the employment of personnel, structures, materials and equipment, through the

fusion of the resources available in the sector and their management according to principles of unity in order to obtain an upgrading of the capabilities that should be replaceable;

- flexibility, based on the unified training of the personnel, according to task-oriented common standards;
- progressiveness and priorities, in personnel training and in the restructuring process;
- rigour in the periodical control of the operational standards and in the employment of the experience acquired.

In this connection, the "Engineers' pole" has worked out a project which aims at conforming the Army's capabilities to NATO specifications. According to this

project, the entire Army personnel will have to acquire a high "sensitiveness" to the danger deriving from explosive devices. Such capabilities must be attained through a specific training carried out with the help of highly qualified personnel.

As for the men charged with the actual clearing, we point out the capabilities summarized at Table 1.

The capabilities must be concentrated at the Army units, as indicated at Table 2.

The training of the personnel tasked with clearing explosive devices is centralized at the Army's Operational Clearing Centre (in Italian, COB).

The Operational Clearing Centre carries out a very

important function in the instruction/training field, through the formation/qualification of specialists and the periodical control of the operational effectiveness.

THE ENGINEER CORPS IN THE CAPABILITY PACKAGES

As should have emerged from the rapid survey of the necessities of support, of the types of activity and capabilities required, the Engineer units contribute to the development of the entire range of operations.

In this perspective, they are necessarily present in all capability packages, as shown at Fig.1.

More in-depth studies will have to evaluate the convenience of introducing an element (at company level) of the Pontooner Regiment (unfordable watercourses) in the projection package, naturally manning it with voluntary personnel.

The first approach to the Engineer units has only wanted to focus on the most outstanding

innovative aspects of the Service.

The first results of this necessarily brief survey should prompt the interested levels to take a closer look - from the doctrinal and organizational points of view, to the employment procedures and logistics. A special consideration should be given to the procurement of material. The times that normally characterize military supplies suggest to limit the amount of the materials to be acquired for each generation. In short, it should be necessary to start at the same time both the procurement programmes and the programmes of research and development concerning the modernization of the same materials.

EVOLUTIONARY TRENDS

The instability of the scenarios and of the operational requirements connected with them, entails the activation of continuous-cycle planning for the timely updating of systems, procedures of employment and organizational structures.

With a view to this, possible needs to introduce variants in the general structure, just drafted following the study of the capability packages, could emerge already during the formulation of the executive plan that should give shape to the outlined setting.

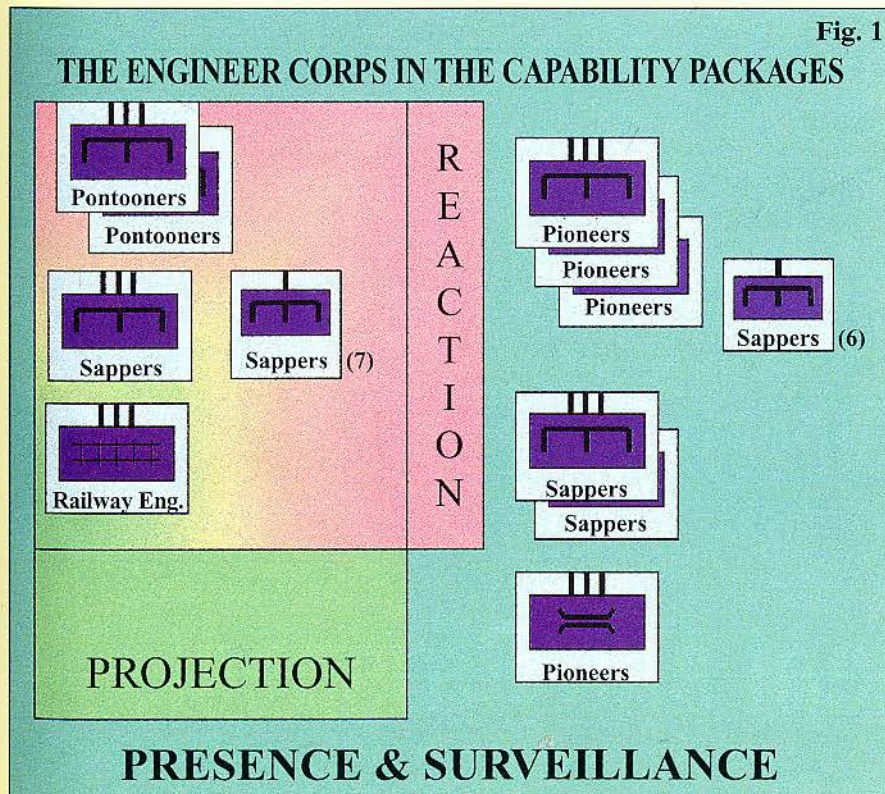
The capabilities typical of the Engineer units, like those of all combat support units, are primarily developed in favour of the manoeuvre forces. Therefore they must be planned, obtained and distributed in conformity with the goals they have to attain and the requirements of the combat function.

The experiences that the Army is making in operations on the national territory, and outside it, supply precise indications in that sense. Some capabilities of moderate technical and specialistic contents, such as, for example, the ones related to the employment of earth-moving equipment, are highly requested especially for needs connected with protection. These capabilities, therefore, in prospect could be permanently decentralized to non-Engineer units. Other capabilities - for example, collection, purification and supply of water, disposal of explosive devices, restoration of river practicability, etc., - on the contrary, must be even more centralized in order to foster their growth, in both the technological and the specialized sectors. These capabilities must then be structured by modules of complete specialistic capabilities, operationally employable in the relevant scenario, according to the principle of task organization.

□

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LAND ARTILLERY

by Rocco Panunzi *
and Gualtiero De Cicco **



Development and Prospects



Within the measures for the restructuring of the Service known as a whole as "Army Project 2000", the Army General Staff is making specific studies on the definition of the role of the land artillery in the future operational scenarios, as well as on the development of modernization programmes in the specific sector, in line with the philosophy of the "operational capability packages", already presented in previous articles published by "Rivista Militare".

In this sense, the present article intends to promote a constructive debate on concepts and projects expanded more detailedly in the recent Army Staff document "Operational capability packages - Land Artillery".

ROLE OF THE ARTILLERY IN OPERATIONS

The present operational scenarios, consequent to the disappearance of a traditional threat, did not diminish at all the role of the land artillery as a fundamental component in the conduct of operations. It is appropriate to underline how land artillery - harmoniously structured in its essential components: targets acquisition, command and control, weapon systems, technical support and logistic support - contributed to the military instrument's credibility, which is an indispensable element to wield the power of deterrence which, in its turn, is a decisive factor in the prevention/management of the crises that can threaten national and allied interests.

Artillery in war operations

The conduct of medium/high intensity operations presupposes the availability of a wide range of land artillery systems, to meet different requirements of indirect fire-support interventions (adherent, in -

depth, areal, precise). According to NATO doctrine, the land artillery units are included in the "combat support" area and are divided, depending on the tasks, into the two classic families of general support and direct support capable, as a whole, to ensure indirect fire-support up to 100-150 km from the contact line.

The general support and direct support components, normally connected to specific tactical and tactical/operational - employment levels, become integrated through the command and control organization for fire support in order to guarantee the timely transfer of capabilities in relation with the situation and the requirements to meet.

The land artillery in general support develops its support, generally, in favour of a Corps. It is employed as a unit, and with a centralized direction, within complex formations (Brigades or Artillery Groups) to batter, with massive and concentrated fire, particularly sensitive targets in the enemy deployment (C3I knots, artillery lines, incoming manoeuvre forces, logistic installations, etc.) within the in depth operations.

It's barely the case to underline that, the more effective the in-depth fire-support is, the less bloody the decisive in - contact operations will be. The general support artillery normally includes units with longest-range systems, both monobarrel (cannons/howitzers) and pluribarrel (multiple rocket launchers) / S-S missile tracks. The latter are the most distinctive resource of the general-support artillery.

In this respect, the experience of the Gulf War, typical example of medium-intensity conflict, has underlined that the units equipped with multiple rocket launchers and conventional S/S tactical missiles can assume a decisive role for the outcome of the operations, that cannot be



adherence of time and space, against the enemy forces which more directly and dangerously engage their elements mainly in the framework of contact operations. The direct-support artillery for the next 10-15 years will still consist of single-barrel weapon systems (cannons/howitzers and heavy mortars), with characteristics of tactical mobility and protection comparable to those of the units they must support.

The artillery in peace-support operations

Within the peace-support operations, with special reference to peacekeeping operations, the role of the military instrument is that of contributing to the settlement of a conflict situation prevailing in a critical area, in compliance with a precise mandate received from the supranational organizations (UN, OSCE, etc.). To guarantee the observance of the mandate, the Rules of Engagement (ROE) defined for the mission envisage, in general, the recourse to force, to be exerted at any rate at a "minimum level", which does not necessarily mean "low level", in relation with the actual situation.

In this perspective, the artillery takes on a very important role, particularly as a deterrent, achieved through the complete visibility of the formations and the carrying out of effective training activities, which can also assume the characteristics of demonstrations.

In case of employment, nevertheless, the fire action must minimize the risk of inflicting collateral damages to persons or things. In this regard, it is to be underlined that any unexpected damage, apart from ethical and moral considerations, could be detrimental for the outcome of the entire mission.

In this perspective, the interventions of the artillery must

be limited anymore just to the "combat support" operational function. The field of action of the land artillery must be extended not only to the RSTA function (Reconnaissance, Surveillance and Target Acquisition) to which it contributes with its assets for the surveillance of the battlefield and the acquisition of the targets, but also to the "Combat" operational function, autonomously carried out through in-depth fire-manoeuvres, with both areal and precise interventions.

The artillery units with longer-range and greater power/precision can therefore influence in a decisive manner the outcome of the in-depth operations, independent of the combat activities carried out by the manoeuvring land forces, mainly engaged in contact operations. This presupposes the availability of appropriate munitions, anti-personnel /anti-vehicles - both "area-saturation" or "precision" (guided) - for the engagement of particular targets, of effective instruments for in-depth surveillance and target acquisition, as well as of automated procedures for analysis and targeting of the

objectives.

Considering the greater fire-capability and longer range of the weapon systems of the infantry / cavalry units (Basic Branch) in their engagements at distances from 0 to 5 km, we can say that the most convenient employment of the land artillery will be that of conducting in-depth operations through the execution of actual strikes or raids employing, with greater flexibility and freedom of action, both the manoeuvre of deployments and the manoeuvre of trajectories, in an operational environment made more dynamic by the spacing out of the elements and the non-linearity of the battle area.

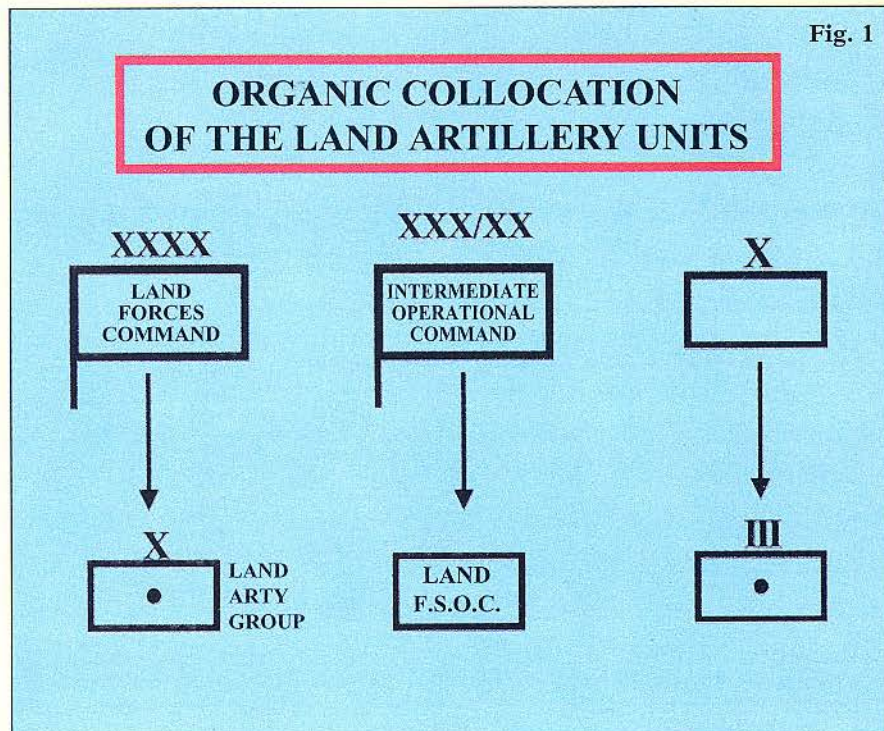
In the short-medium term, at any rate, a certain importance will be maintained by the land artillery in the direct-support role, in relation with the scarcity of air-mechanized units (combat - and attack-helicopters) which could provide the necessary close fire support to the manoeuvring forces. They normally operate at artillery regiment level, reinforced if necessary, in favour of a Brigade, in order to support the action of the manoeuvring forces up to 10-15 km from the contact line, in

be marked by the clear selectivity of the objectives and absolute precision.

These results can be achieved through the accurate predisposition of the interventions and the direct control of the fire by forward observers, capable of monitoring and transmitting data, in real time, on the objectives to strike. In this type of operations, the single-barrel artillery units, characterized by high flexibility, can operate also at howitzers/mortar-platoon level, with their own command posts and observation teams in their favour, thus permitting a wider distribution and, therefore, a better protection to their troops on the ground.

The deterrence vis-à-vis possible hostile factions and the reassurance for the friendly troops are in this way better determined.

In the future, the foreseeable technological developments in the sector of technical support for land artillery, deriving from the widespread employment of meteorological computers, inertial navigators, GPS systems, orientation gyroscopes, etc., will permit also the employment of single launchers/guns to carry out so-called "surgical interventions" with "smart" ammunition, i.e. munitions guided during all the duration of the trajectory or in its final part (laser-guided ammunition, fiberoptic-guided missiles, etc.) to engage also targets located near or within densely populated areas. Furthermore, within the peacekeeping operations, the land-artillery units, with their own net of observers and working together with the assets of the units assigned to surveillance and target acquisition (day/night vision systems, radars for battlefield surveillance, counterfire radars, phonotelemetric, sets, etc.) contribute to the increment of the Intervention Force's capability of monitoring the observance of the accords signed by the conflicting parties,



immediately reporting any violation of the agreements.

ORGANIZATION OF THE LAND ARTILLERY UNITS IN "ARMY PROJECT 2000"

In relation with the role of the land artillery and the more general context of the new structure of the operational forces, the Army General Staff has adopted an organizational solution capable of meeting the different requirements of fire support at the various levels, balancing wherever possible, the need of concentrating the resources with that of maintaining the "interservice culture" for the development of the activities of cooperation between Basic Branch and Artillery within the Brigades.

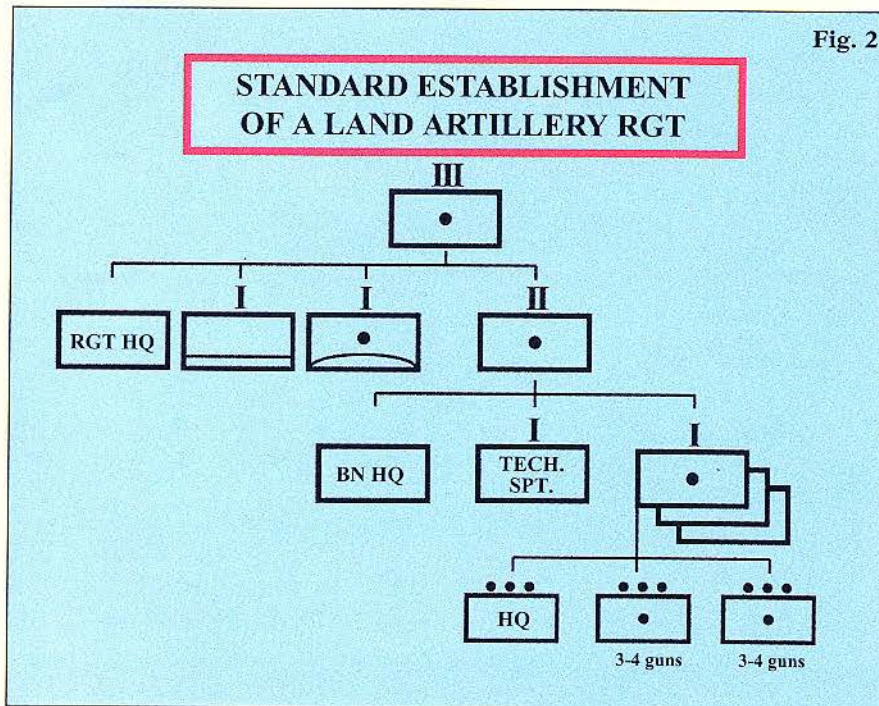
The solution adopted (Fig.1) provides for the concentration of the longer-range artillery (multiple rocket-launcher units) and the single-barrel artillery units assigned to general support (in the future, they will be totally or partially replaced by units of S/S fiberoptic guided missiles) in a Land Artillery Group subordinate to the Land Forces

Command, while keeping in each Brigade the present regiment-level artillery component for the direct support role.

At Intermediate Operational Command (IOC), organic artillery units are not envisaged. Nevertheless, studies are under way to consider the convenience of creating an FSOC (Fire Support Operation Centre: C2 element for the management of land and A/A artillery, as well as for the coordination and employment of all fire sources (land, air, sea) in the area of responsibility of the Division/Brigade. The FSOC could either be autonomous or act as a cell of the MAIN within the I.O.C. Command Post, and should be able to manage, from time to time, the artillery units that could be assigned to the IOC by the Land Forces Command's Artillery Group, detached from the Brigades, according to the "task organization" principle, to give a unitary character to the fire-manoeuve at Corps/Division level.

As far as the structure of the Artillery Regiment (Fig.2) is concerned, the present organization will be maintained, i.e. the land

Fig. 2



artillery battalion will have three batteries with homogeneous weapon systems. This solution meets the normal requirements of training and techno-logistic support of the units in peacetime. In operations, in relation with the necessary operational capabilities, it will be possible to set up, following the "task organization" principle, Artillery Regiments with ad hoc battalions, with 3-4 batteries armed with possibly different systems (e.g. mix of 120mm mortars and 155mm howitzers for low-intensity operations, or 155mm self-propelled guns and rocket-launchers, or also rocket launchers and missile tracks for medium-high intensity operations). Further, the possibility is now under study of adopting, for the mortars/howitzers/rocket-launcher battery, a subdivision into two platoons, each with 3-4 guns/launchers, in order to increase its techno-tactical flexibility.

THE LAND ARTILLERY IN THE OPERATIONAL CAPABILITY PACKAGES

The military instrument outlined

by the model "Army Project 2000" is based, in short, on the concept of the real operational capabilities to express, according to the fundamental principles of the modular nature of the structure and economy of formations.

To this end, the forces have been divided into four "packages" (Fig.3), in relation with the

priorities of their employment options:

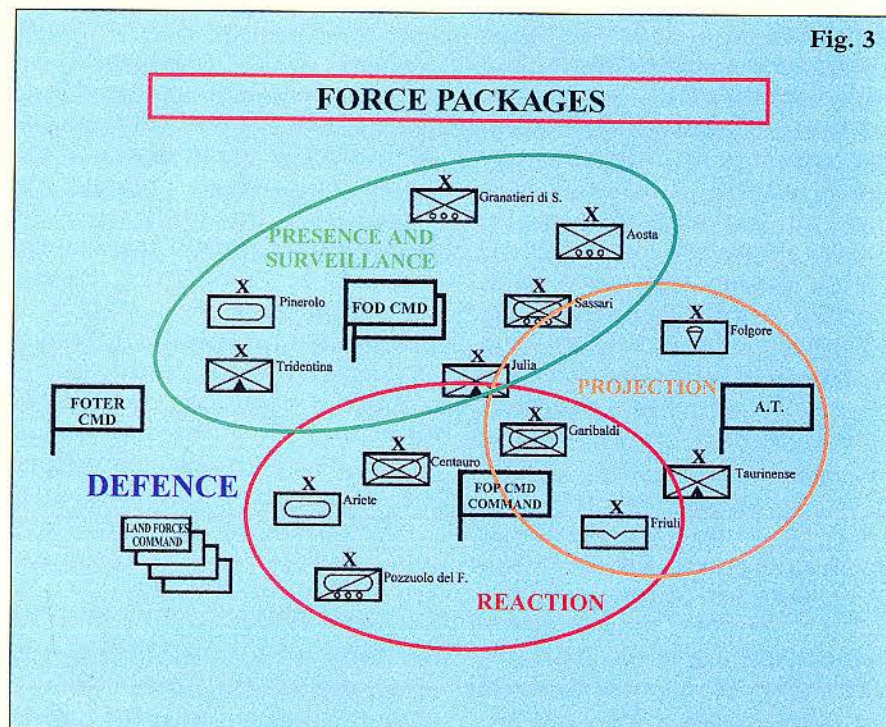
- "Projection forces" package, for "out-of-area" operations, essentially related to peace support operations (PSOs);
- "Reaction forces" package destined to NATO's IRF and RRF, for the management of crises in NATO's contingency areas;
- "Presence and Surveillance" forces package, for the operations related with presence and surveillance but capable, on an emergency, of giving its contribution in "out of area" and "common defence" operations.
- "Defence Forces" package, which includes the forces of the preceding packages, the Command bodies responsible for their employment and the remaining Supports.

In this picture the land artillery units play, within the different packages, the specific roles and tasks described below.

"Projection Forces" package

Within the projection forces, the possible role of the land

Fig. 3



artillery is that of increasing the deterrent capabilities of a national/multipational Intervention Force, augmenting the capability of long-range immediate reaction and protection of its units in case of deterioration of the conflict situations, always possible on account of the instability and uncertainty which are distinguishing marks of this type of interventions.

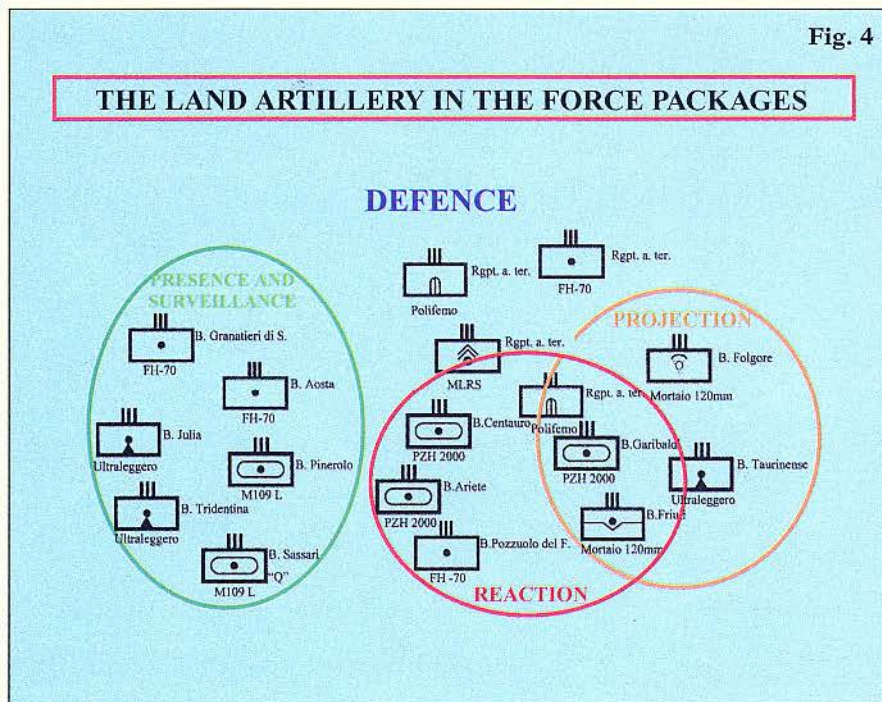
On the basis of the current operational concept of the Army, the maximum size envisaged for the employment of national forces is that of a Division with two Brigades. In case of protracted interventions, the artillery units must be rotated on a four - monthly basis, just like the infantry units.

For Brigade-level interventions, based on the experience gained in recent PSOs, it is envisaged to have in the Operation Theatre one artillery battery with 6-8 guns, preferably weapons with high deterrent value (155mm self-propelled artillery units, compatibly with the operational environment, and two more batteries outside the Theatre, for rotations. For longer interventions, at Division/Intervention Force level under national Command, it has to be envisaged, at the most, the in-Theatre availability of one Artillery Regiment, plus two more Regiments outside the Theatre, for rotations.

In this framework, the artillery units of the package will consist of four Artillery Regiments organic to the Brigades of the relevant force package. In a long-term perspective, this force package will have to rely also on artillery units armed with the fiberoptic guided missile "Polifemo", suitable for long-range "surgical interventions".

"Reaction Forces" package

The priority tasks of the reaction



Forces fall within the context of the activities of prevention/management of crises or of real combat activities carried out by NATO within art.5 operations (ACE area of responsibility) or non-art.5 (out-of-area peacekeeping / enforcement operations).

For these requirements, in compliance with the obligations subscribed within ARRC, one Artillery Regiment in direct support for each Brigade, and at least 1-2 Artillery Regiments with long-range systems (missiles and/or rocket launchers) must be envisaged. These units will be taken from the Land Forces' land-artillery Group, to meet the need of general support of the 3rd Italian Division (framework).

The total requirement is 6-7 Artillery Regiments - two of which formerly belonged to the projection package - which must also carry out training activities concerning classic procedures of operational employment.

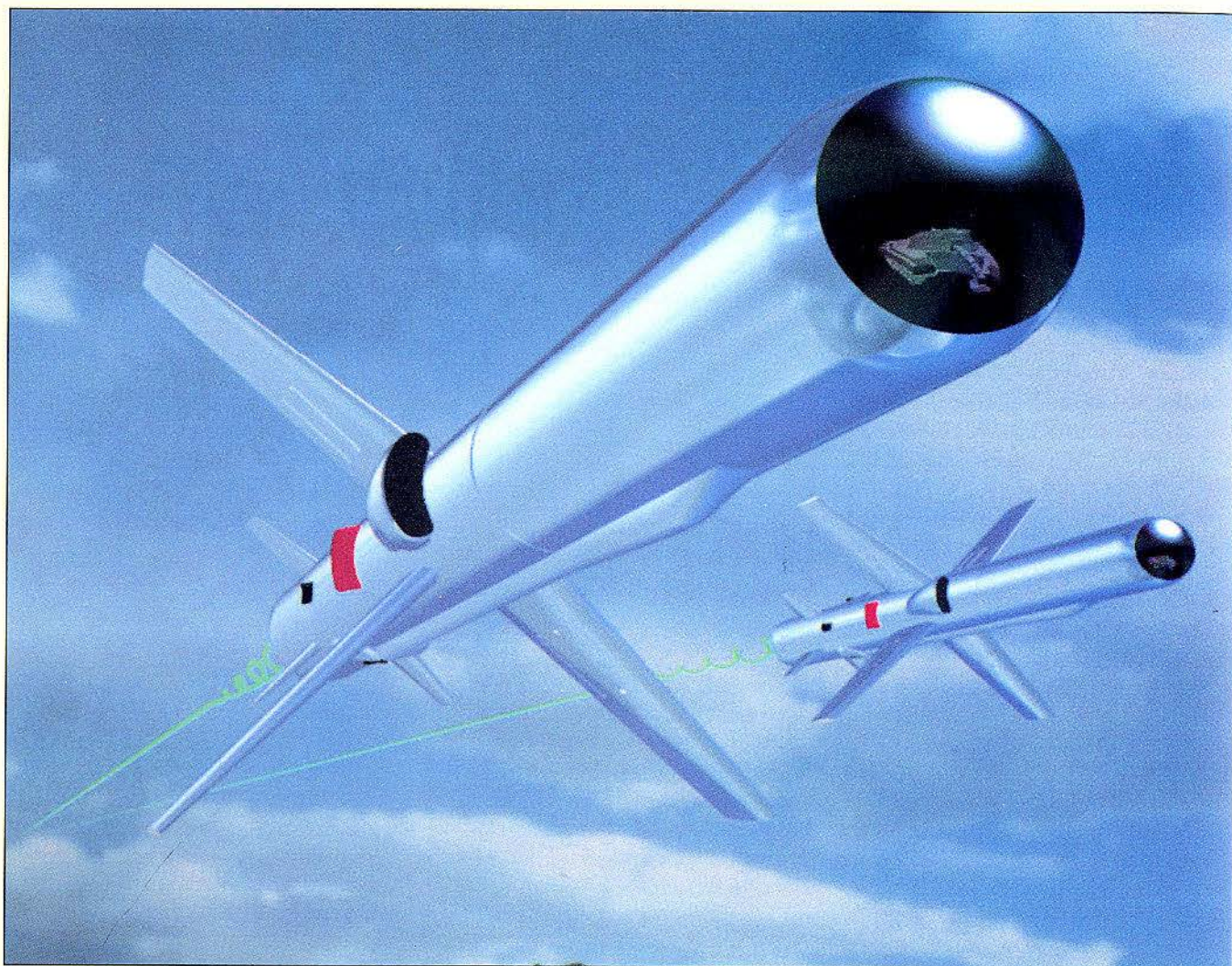
"Presence and surveillance" forces package

The land artillery units included in this package (5 Regiments plus

one "framework" Regiment), besides carrying out the Branch's training activities on the national territory, in order to acquire their peculiar operational capabilities, in line with the objective of preparation of the military instrument that they are expected to reach with their activity of forward presence, participate with their contribution in the operations for the safeguard of the free Institutions, the maintenance of law and order and the welfare of the national community, carrying out training and operational activities together with the units of various Branches that belong to the Brigades of which they are an organic component.

"Defence forces" package

The defence Forces include all units, Commands and remaining supports, destined to guarantee, in a joint and international context, the security of the Country, first of all through deterrence, achieved with a credible military instrument and, as a last resort, through the direct defence of the territory. In this perspective, as regards land artillery, the package includes the



Artillery Regiments of all Brigades and the Regiments subordinate to the Land Artillery Group Command, for a total of 16-17 Regiments, since the priority requirement of defence of the territory would automatically absorb all the assets described in the preceding three force packages.

DEVELOPMENT OF THE "ARTILLERY SYSTEM"

The operational capability of the land artillery units is closely connected with-and depends on - the performance of the technologically advanced materials present in the following subsystems, within the "Artillery System":

- arms and ammunition;
- surveillance of the battlefield and target acquisition;

- automation of fire, command and control;
- technical support;
- logistic support.

Arms and Ammunition

As regards the introduction in service of new weapon systems, the Service has already found, in the multinational environment, the materials capable of meeting its modernization requirements. At the moment, the main programmes undergoing the "Research and Development" and the "Modernization and Renewal" phases are directed towards the introduction in service of a rifled-barrel 120mm mortar; an ultralight (less than 4 tons) 155/39mm towed howitzer; the PZH 2000 (155/52mm) self-propelled gun, the ATACMS S/S

tactical missile and the "Polifemo" fiberoptic guided missile.

As concerns the times connected with the present prospects of development of the different programmes, we can roughly envisage that:

- in the short term (1998-2002) it will be possible to put into service a 120mm rifled mortar for the Artillery Regiments of the "Folgore" Paratroop Brigade and the "Friuli" airmobile Brigade, which is to be constituted shortly;
- in the medium term (2003-2007), it will be possible to introduce the 155/39 ultralight howitzer for the Artillery Regiments of the Alpine Brigades and possibly the Cavalry Brigade, replace the self-propelled M109L with the PZH 2000 (155/52) self-propelled

howitzer in the mechanized / armoured Brigades included in the projection/reaction packages, proceed to the reconfiguration of part of the launchers of the MLRS Regiments, in order to enable this unit to employ also the S/S ATACMS tactical missile;

- in the long term (2008-2012) it will be possible to put into service the "Polifemo" fiberoptical guided missile system for 1-2 Artillery Regiments in general support, subordinate to the Land Forces' Land Artillery Group Command.

At the same time, the M109L guns will be replaced with FH-70s, in the mechanized Brigades of envisaged transformation into armoured units, while munitions with increased range and effectiveness will put in service.

Therefore, the whole of the delivery means described above will be marked, in the post-2010 years, by an appropriate mix of single-barrel artillery, multiple rocket-launcher systems and S/S guided missiles, which will give the artillery units the possibility of flexibility carrying out tasks of general and direct support, within the framework of both war operations and PSOs.

Surveillance of the battlefield and target acquisition

The "Surveillance of the battlefield and target acquisition" component of the "Artillery System" will have to be capable of permitting the easy recourse to an integrate and effective fire-manoeuve, characterized by the possibility of employing all weapon systems at the same time, with rapid concentrations of power at the longest ranges, as well as the saturation of areas of operational interest. To this end, the programmes in this specific sector aim at introducing in service different means and sensors, such as:

- laser telegoniometers and laser



IRT;

- phonotelemetric sets;
- surveillance and target-acquisition radar;
- drones and mini RPVs;
- helicopter - borne surveillance radar;
- counterfire radar,

capable of ensuring the coverage of the areas of operational responsibility, acquiring in - depth targets, gathering and processing information in real time,

spreading information and a global situation picture, control the effects of fire.

Of the materials listed above, the radar telegoniometers are already in service, while programmes are under way for the procurement of the surveillance and target-acquisition radar, drones, helicopter - borne radar, counterfire radar.

This equipment will be procured within the CATRIN/SORAO



programme, which will be operational soon after the year 2000.

As to the mini RPV systems, activities are being carried out with the purpose of revitalizing the "Mirach 20" system, awaiting for the introduction of the "Mirach 26" and the "Mirach 150" long-range drone, while the "Creso" helicopter-borne radar system is under evaluation, together with its French homologue, the "Horizon".

Automation of fire and Command and Control

The SAGAT system, for the automation of the techno-tactical functions of the land-artillery battalion, is the cornerstone of the management of the entire "Artillery System". SAGAT

consists of a series of computers and communication systems, able to correlate observation and fire control, process of the firing data, coordination of the firing units and to monitor the operational, tactical and logistic situation.

Recently, a requirement for the optimization of the system already in service has been revised, in order to make it suitable to meet the needs of the MLRS Regiment and to get rid of the well-know limitations, due to a rigid and old software and a decidedly obsolete hardware.

Technical support

It concerns equipment and materiel used for:

- topographic surveys;

- meteorologic surveys;

Topographic surveying

Topographic surveys will be carried out more and more by means of systems for the determination of positions, which will be widely distributed at all levels. To this end, specific programmes are under way and, by the end of 1999, laser inertial-navigators - integrated by GPS - will be put in service. Their precision is in the region of 5-10 metres, and they will be distributed to artillery battalions and mortar units.

In the future, the same systems will be improved, and they could be directly installed on the guns, thus enabling crews to

carry out their own topographic preparation.

Meteorologic surveying

The acquisition of meteorological data, as well as their correlation and distribution in a short time through the use of formatted messages, is crucial for a correct techno-tactical evaluation.

As far as the land artillery is concerned, the envisaged introduction of smart and increased range/effectiveness munitions, entails the need of new developments in the sectors of measurements and metcast. The availability in real time of updated meteorological data is now indispensable, in order to effectively intervene from the first salvo.

To this end, a programme is under way for the procurement of radiosonde systems with GPS antennas, radiogoniometers, and computer for the rapid processing of the atmospheric data. At present this equipment can be used in real time by the SAGAT automation system and, in the future, will be employable by all surveillance systems.

Logistic support

The reorganization on a regimental basis and the incessant technological evolution of weapon systems, equipment and materiel, have imposed continuous adaptations upon the logistic organization responsible for supporting the artillery units.

Particularly important are the themes connected with maintenance, procurement of spare parts, and ammunition supply, which are now faced in a perspective aiming at guaranteeing the standardization and interoperability of the Components of the equipment.

In this picture, an adaptation process is being carried out, with the objective of optimizing the functional capacity of the logistic chain.



CONCLUSIONS

Within today's operational scenarios, characterized in extreme situations, by tridimensional joint operations conducted in a continuative way, the land artillery will continue to play a central role for the fire support to the land forces, either as "combat support" component or directly as a real "combat" component in the development of in-depth operations.

The land artillery, which until a few years ago was mainly considered a resource consisting of launching - systems and ammunition, has now taken on the configuration of an integrated "system" of equipment, materiel and procedures.

The land artillery, therefore, will have to increase the performance and the effectiveness of its interventions, through a constant update of the techno-tactical employment procedures, which should avail themselves of the innovations and progress realized by the "Artillery System" in the sectors of command and control, target acquisition, weapon systems, automated fire direction and control, and

logistic support. Consequently, the effective employment of the land artillery corresponds to the development and availability, in a balanced manner, of all the components of the "Artillery System", since a shortcoming in any sector would irremediably impair the efficacy of the whole system.

In particular, the optimization of the trinomial "target acquisition, command and control, fire" and the adoption of weapon systems and munitions with a better performance, gives the artillery a higher quality rate, and, as a consequence, an increased role compared to the simple mass-employment of the past, against mainly static targets, in close contact with the friendly troops.

□

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TOWARDS THE NEW ARMY

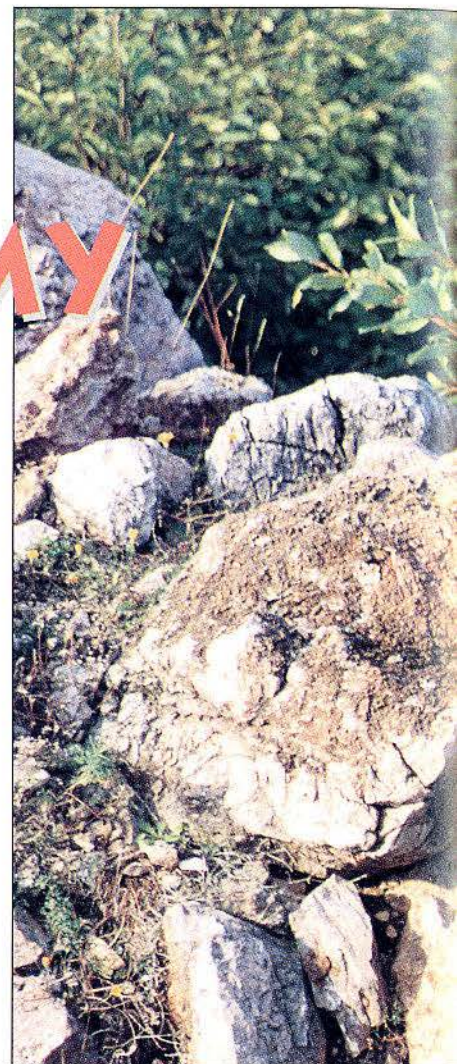
Review of the situation

by Amilcare Casalotto * and Nicola Gelao **

With the series of articles being published in the feature "Army-Project 2000", "Rivista Militare" wishes to offer the reader a complete picture of the definition of the Army's operational concept and of the Command and Control structure, with particular regard to the Operational Capability Packages.

The following work, avoiding all risks of redundancy, wants to be just a "complementary" installment, to focus the "archetypal" aspects of the new Army, i.e. its new normative and organizational

architecture in its various parts: operational, territorial, logistic, didactic, formative. By now we are in the finishing straight towards the completion of a complex operation of "remaking", in order to build an instrument that, although limited in size, will be highly operational and capable of effectively meeting the challenges of the future.





CHANGES IN THE REFERENCE PICTURE

Since the early '90s a radical revision of doctrinal picture, Command organization and force structure has started within the Atlantic Alliance, spurred by deep changes in the Euro-Mediterranean geopolitical situation.

At conceptual level, great importance is assumed by the shift from the principle of "collective defence" to that of "collective

security" which enhanced, in particular, the function of the Armed Forces as an indispensable instrument in support of the foreign and security policies, through a more and more frequent recourse to multinational cooperation, under the aegis of international Organizations or Alliances, such as the UN, NATO, OSCE, EU and WEU.

On the other hand, the basic reasons for this "change" are not only geopolitical or strategic, but

also - and their weight increases year by year - of an economic nature. As a matter of fact, all Western Countries have adopted a strict policy of containment of military expenditures, implying a rationalization, in a reductive sense, of their Armed Forces. But the general purpose is not limited to the achievement of a reduction in purely quantitative terms. In fact, the most important objective is that of being able to have at one's

DECREE LAW MAY 12, 1995, no 196

fig. 1

Implementation of art.3 of the Law of May 6, 1992, on the reorganization of rolls and changes in the norms relevant to the recruitment, status and advancement of the non-executive personnel of the Armed Forces.

This provision derives from the Law no. 216 of 1992, and is aimed at achieving a substantial parity, in financial terms and career developments, between the non-executive personnel of the Armed Forces and the Police Forces.

The decree:

- institutes the following rolls: Marshals, Sergeants and Regular Troop Volunteers;
- establishes the relevant numerical strength, and precisely: 17,000 Marshals, 10,700 Sergeants and 39,722 Volunteers (of which 16,722 regulars and 23,000 short-term).

LAW FEBRUARY 18, 1997, no.25

fig. 2

Attributions of the Minister of Defence, restructuring of the Armed Forces' High Ranks and of the Administration of Defence

The law:

- indicates the Chief of Staff of Defence - directly subordinate to the Minister - as the organ responsible for the employment of the Armed Forces as a whole;
- places the Chiefs of Staff of the Army, Navy and Air Force under the Chief of Staff of Defence;
- identifies in the Secretary General of Defence the sole responsible (to the Minister of Defence for the legal-administrative aspects, and to the CHOD for the techno-operational ones) of the direction and coordination of the activities connected with the implementation of the techno-financial programmes, within the general planning of the military instrument;
- assigns to the Service Chiefs of Staff the responsibility of the organization, preparation and control of the respective Service, on which they exercise their command function.

DECREE LAW OF DECEMBER 30, 1997, no.490

fig. 3

Reorganization of the recruitment, legal status and advancement of the Officers in the Armed Forces

This measure derives from the provision of the Law of December 23, 1996 no. 662 (Financial Law for 1997) and provides for:

- the reorganization of the rolls in a joint perspective, in relation to the reduction, to be effected by the end of 2005, of the number of Officers (for the Army, from 16,054 to 12,050);
- the confirmation of the validity of the normalized promotion-system (a fixed number of promotions per-year) and the definition of "analogous" career courses for "homologous" roles;
- the institution of an administrative career, to compensate for a generalized slowing down of careers, in order to safeguard the financial aspects.

disposal military instruments that - albeit limited in size - are endowed with high-level operational capabilities and, above all, able to effectively integrate in multinational complexes in order to face - as happened several times - crisis situations and, by doing so, giving substance to the European policy of common security.

The trends and objectives pointed out by NATO have been

synthesized nationally with the basic legislative measures approved from 1995 to this day and, in particular (in chronological order of issue):

- institution of new professional figures in the NCO and volunteer categories and relevant assets (Decree-law May, 12, 1995, no. 1995-fig. 1);
- reform of the military High Ranks, through which planning, management and employment

of the Armed Forces can be carried out with a unitary vision (Law February 18, 1997, no. 25-fig. 2);

- introduction of the New Law on the Advancement of Officers which, among other things, has redefined the "organizational pyramids" of all Cadres (Decree-law December 30, 1997, no. 490-fig. 3).

All these changes, of different nature and wide scope, have imposed the reconfiguration of the Summit and all components of the Army, in order to:

- align the Command structures of the operational component to the organization models adopted by NATO;
- increase the forces' efficiency and operational readiness, and the projection capabilities of a part of them;
- implement the programme aimed at giving a professional character to the Armed Forces, changing into "all-volunteer" units all the contingents destined to out-of-area operations and to NATO's Immediate and Rapid-Response forces;
- gradually reduce the shortages in manpower, in order to reach, by 2005, the objectives of the new legislative system.

RECONFIGURATION OF THE ARMY SUMMIT

The structure of the Highest Ranks of the Army has been reshaped in line with the Reform Law of the Ministry of Defence.

This normative source gives the responsibility of planning and employing the Armed Forces to the Chief of the Defence Staff, while it confers to the Service Chiefs of Staff the responsibility of the preparation of the respective Service. It also envisages the joint centralization of some functions that until now were carried out by the Service Staffs. As a consequence:

- the 2nd Division / SIOS (Army

- Intelligence) has been abolished;
- the Logistic Inspectorate, now separated from the Army Staff, has incorporated the Commands of the Logistic Corps (Transports and Material-now Branch-, Service and Administration, Medical and Veterinary Corps) appropriately reconfigured as Departments;
- the Army Branch-Inspectorate has been established. The Deputy Branch-Inspectors are subordinate to it, and they also act as Commandants of the respective Branch Schools;
- the Army School-Inspectorate has been reorganized;
- the Command of the Technical Corps (now Corps of Engineers) has been reconfigured as "Office of the General with the functions of Chief of the Army Technical Corps (Corps of Engineers)".

As a consequence of these changes, the Armed Forces have now a new structure much lighter than the previous one - within which the following Commanders and Inspectors are subordinate to the Army Chief of Staff (fig. 4):

- Commander, Operational Land Forces (COMFOTER);
- Logistic Inspector (ISPEL);
- Arms Inspector (ISPEARMI);
- Schools Inspector (ISPE SCUOLE);
- 3 Military Region Commanders.

In particular, as far as the Army General Staff is concerned, the new structure is as follows (fig 5):

- "Employment of Personnel Division"** (1), which will acquire "in toto" the "employment" function of Officers, NCOs, volunteers and conscripts of the Service. Today these tasks are carried out by the respective General Directorates. The Division will consist of three "Employment Offices" (Officers, NCOs and Civilians, Volunteers and Conscripts) and one Legal Office;

fig. 4

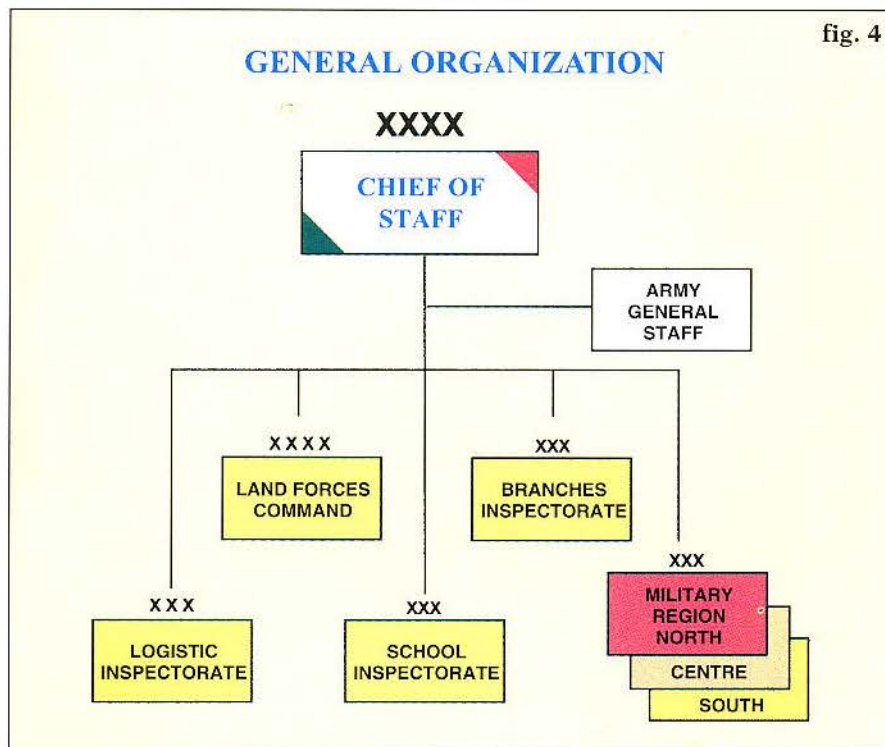
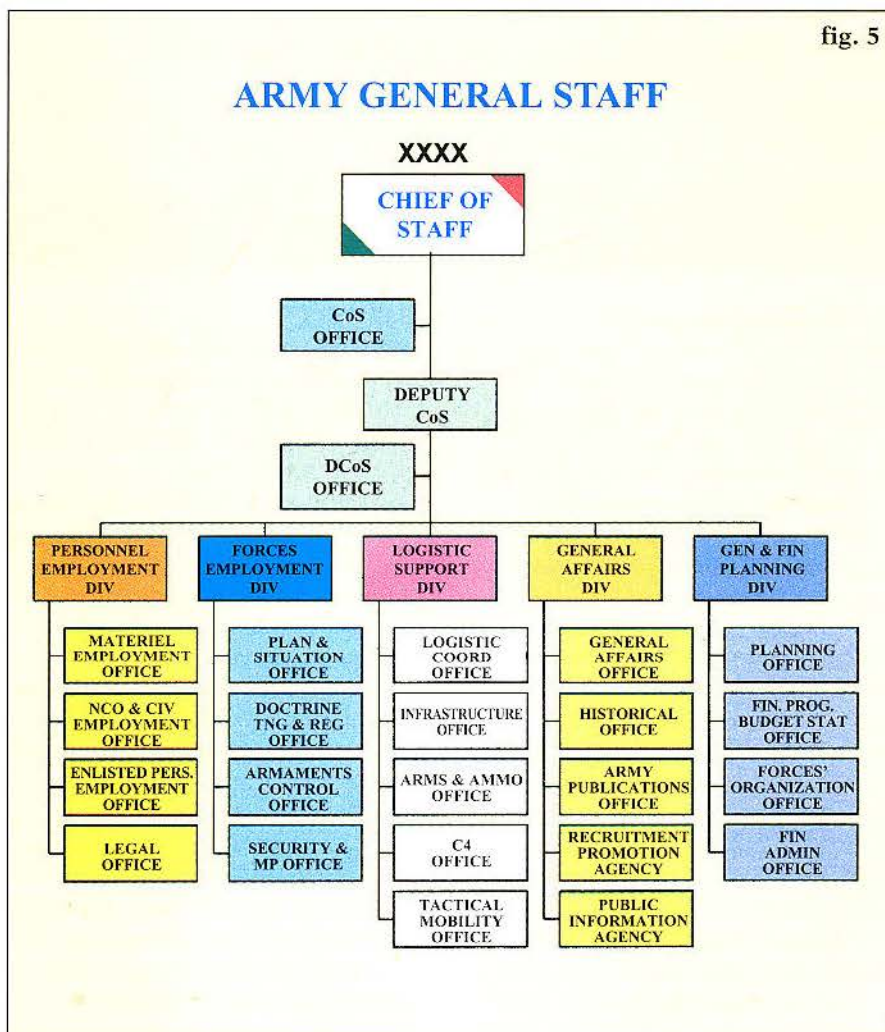


fig. 5





M109 self-propelled gun in a live-firing exercise.

- **“Forces Employment Division”**, with four Offices: Plans and Situation, Doctrine, Training and Regulations, Armaments’ Control and Security - Military Police;
- **“Logistic Support Division”**, responsible for the elaboration of the logistic policy and doctrine of the Army, with five Offices: Logistic Coordination, Infrastructure, Arms and Ammunition, Signal and Informatics, Tactical Mobility;
- **“General Affairs Division”**, which has improved its Public Information and Propaganda sector, especially as regards the enlistment of short-term

volunteers. It consists of two Offices (General Affairs Office and Historical Office), one Public Information Centre and two Agencies (Press and Enlistments’ Promotion);

- **“General and Financial Planning Division”**: established with the reconfiguration of the General Office for Planning and Financial Programming, consists of four offices: Planning, Financial Programming and Budget, Forces’ Organization (former Organization Office) and Administration.

This is the most innovative transformation, in that this Division is tasked with the elaboration of medium/long-term planning, based on the presumable future operational scenarios and, consequently, it must lay down the programme

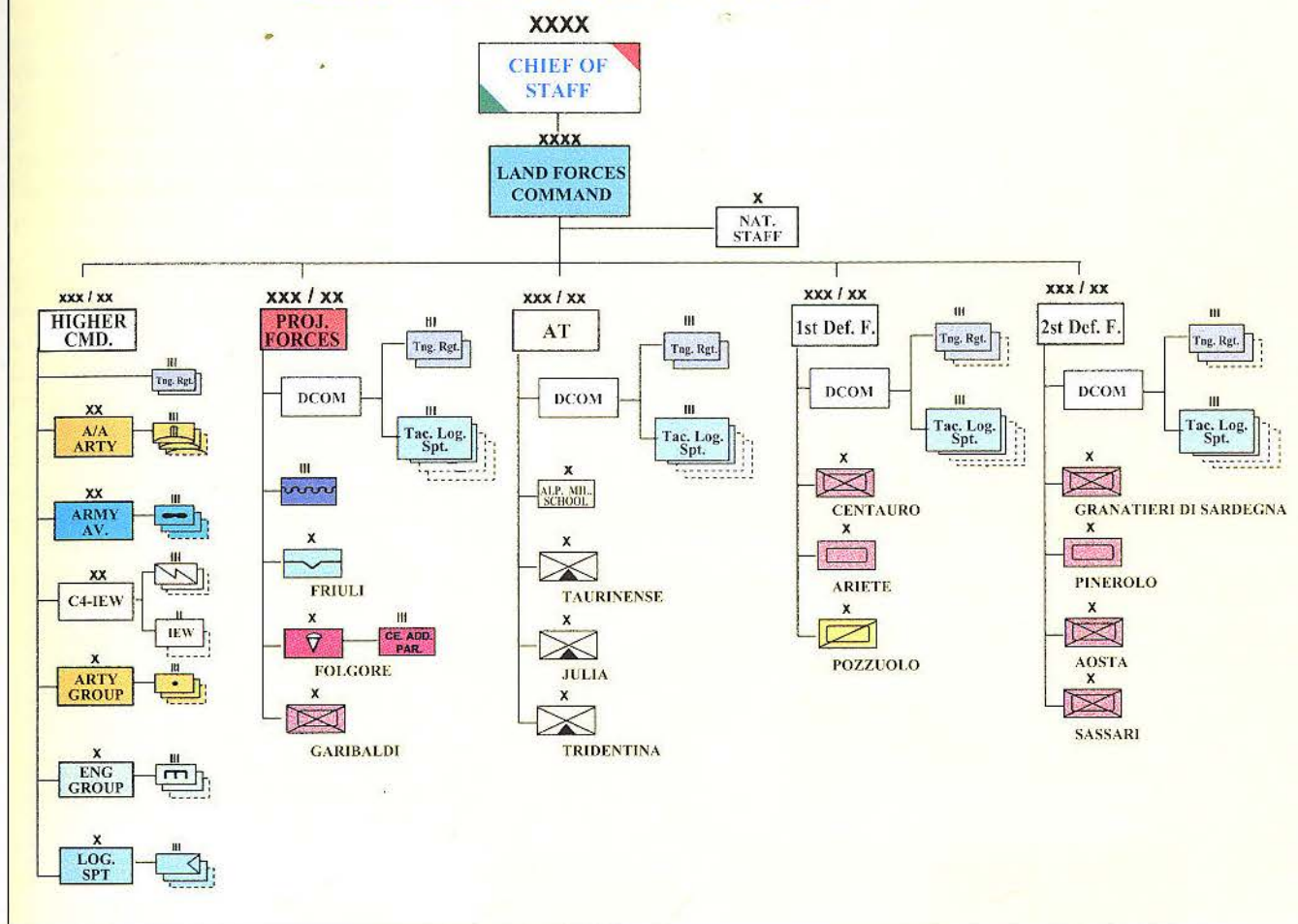
lines on all sectors, coherently with the prefigured objectives and compatibly with the financial resources available.

REORGANIZATION OF THE OPERATIONAL FORCES

The reorganization of the operational forces aims at “building” a land instrument capable of carrying out the assigned tasks in the best possible way, ensuring:

- a qualified and active presence on the national territory, in order to exercise a constant vigilance and effectively concur to the collective security and welfare;
- the capability of projecting forces to areas of crisis, to contribute, in joint and multinational contexts, to the prevention of situations of instability, tension or crisis, to safeguard the

OPERATIONAL LAND FORCES



national interests and/or to contribute to the common security and international legality;

- the defence of the national territory and participation in the common defence within the Atlantic Alliance, through the use of force, when the deterrent role of the military instruments proves to be ineffective.

On the basis of these functions, the concept of "capability packages" has been developed (see Rivista Militare, no. 1/98), with the definition of groups of forces, harmonically assembled according to the requirements: **projection forces**, **reaction forces**, **presence and surveillance forces**. One group, named "**defence forces**" includes the whole operational component.

The definition of the "capability packages" has been worked out

together with the reorganization of the chain of command of the land forces, where it was established that the figure of the future COMJSRC (now COMLANDSOUTH) should coincide with that of the Commander of the Operational Land Forces (COMFOTER), thus attributing a "double hat" to a single High Commander.

This decision is at the origin of the adjustment of the command and control organization of the Army, with the establishment of a national command-structure, capable of managing the whole of the operational land forces and of supervising their preparation.

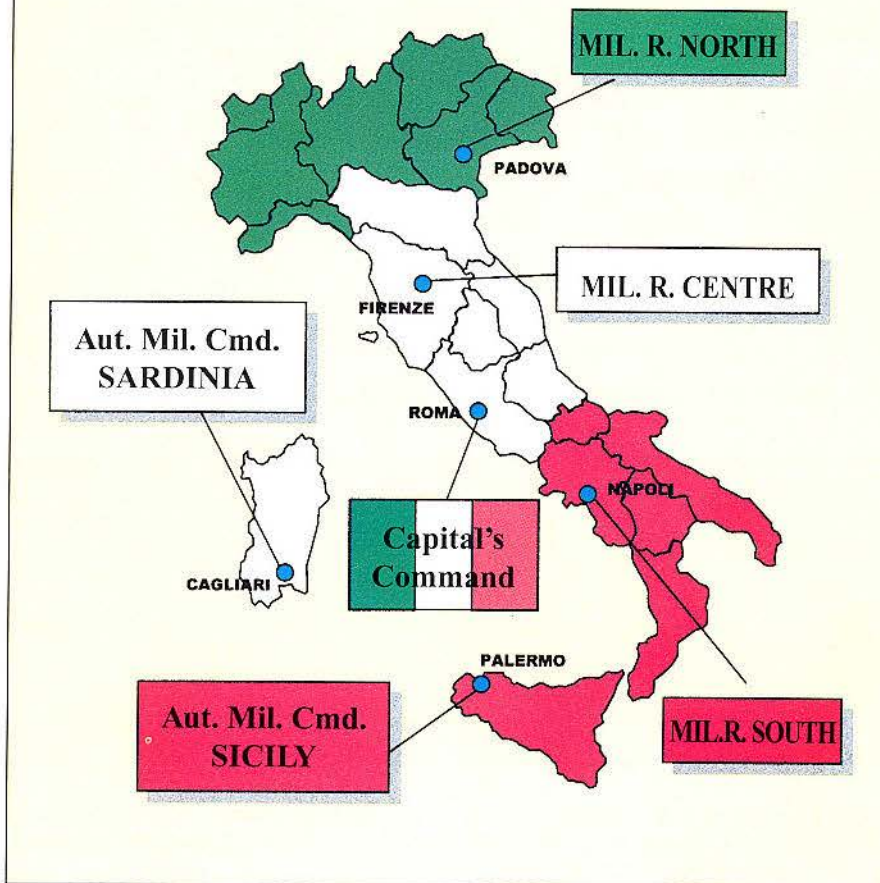
The same command has also been attributed the task of planning and conducting the operations that until now were in the responsibility of the Military Regions, in the sector of territorial defence.

COMFOTER's subordinates are:

- a command, expandable in a joint and in a multinational sense, able of both project itself to an external Theatre, thus performing the functions of Forces Command ("**projection**" function) and to act, within a NATO operation, as the Headquarters of the Italian "Framework" Division assigned to the ARRC ("**reaction**" function);
- a command, potentially projectable and expandable, capable of replacing the former in case of long and/or high-attrition operations;
- two commands in charge of the management of the operational requirements connected with the "**presence and surveillance**" function, and the cooperation with other State bodies in case of disaster or serious disturbances of the

fig. 7

TERRITORIAL ORGANIZATION



public order. As a consequence, the operational component of the Army has been divided into four complexes of forces, subordinate to the same number of Intermediate Operational Commands (fig. 6). They are:

- **Projection Forces Command in Milano (FOP):** established through the reconfiguration of the 3rd Corps Command, consists of the Garibaldi, Folgore, Friuli Brigades and eight regiments for tactical/logistic/training support. These units are, or will be, completely made up by volunteers. FOP has also the task of detaching the Headquarters of the 3rd Italian Division assigned to the ARCC;

- **Alpine Troops Command in Bolzano (TA),** potentially projectable: activated by reconfiguring the 4th Corps Command, includes the Taurinense Brigade based on volunteers and two other Brigades, Julia and Tridentina, plus eight regiments for tactical/logistic/training support;
- **1st Defence Forces Command in Vittorio Veneto (1° Cdo FOD):** established with the reorganization of the preexistent 5th Corps Command. Its subordinate units are the Ariete, Centauro and Pozzuolo del Friuli Brigades, together with eight regiments for

tactical/logistic/training support.

- **2nd Defence Forces Command in Napoli (2° Cdo FOD):** now at the organizational stage, will be manned by personnel partially taken from the Southern Military Region; will include the Granatieri di Sardegna, Sassari, Pinerolo, Aosta Brigades, as well as eight regiments for tactical/logistic/training support.

The first two Commands are readily employable for out-of-area operations and can expand to assume the Joint/Combined configuration, with the acquisition of joint/multinational modular cells.

Furthermore, the Commander of the Land Operational Forces avails himself of the action of the Support Commander, responsible for the coordination and control of the Operational and Logistic Supports of the Land Forces, which include A/A Artillery, Army Aviation, Artillery and Engineer Groups, the Logistic Support Command and the C4-IEW Command, for a total of twenty-three regiment-level units.

REORGANIZATION OF THE TERRITORIAL STRUCTURE

This structure, at present very oversized especially in relation to the architecture that the Army will assume in the medium/short term, will undergo radical changes. This is in fact an undelayable requirement, considering the need to balance the various components of the Service, without further cuts in the operational forces.

The reorganization of the territorial component has, furthermore, the objective of clearly defining the three command lines - "operational", "logistic" and "territorial" - in order to eliminate the overlap/duplication areas, thus reducing the command structures, as well as those related to logistic and administrative support.

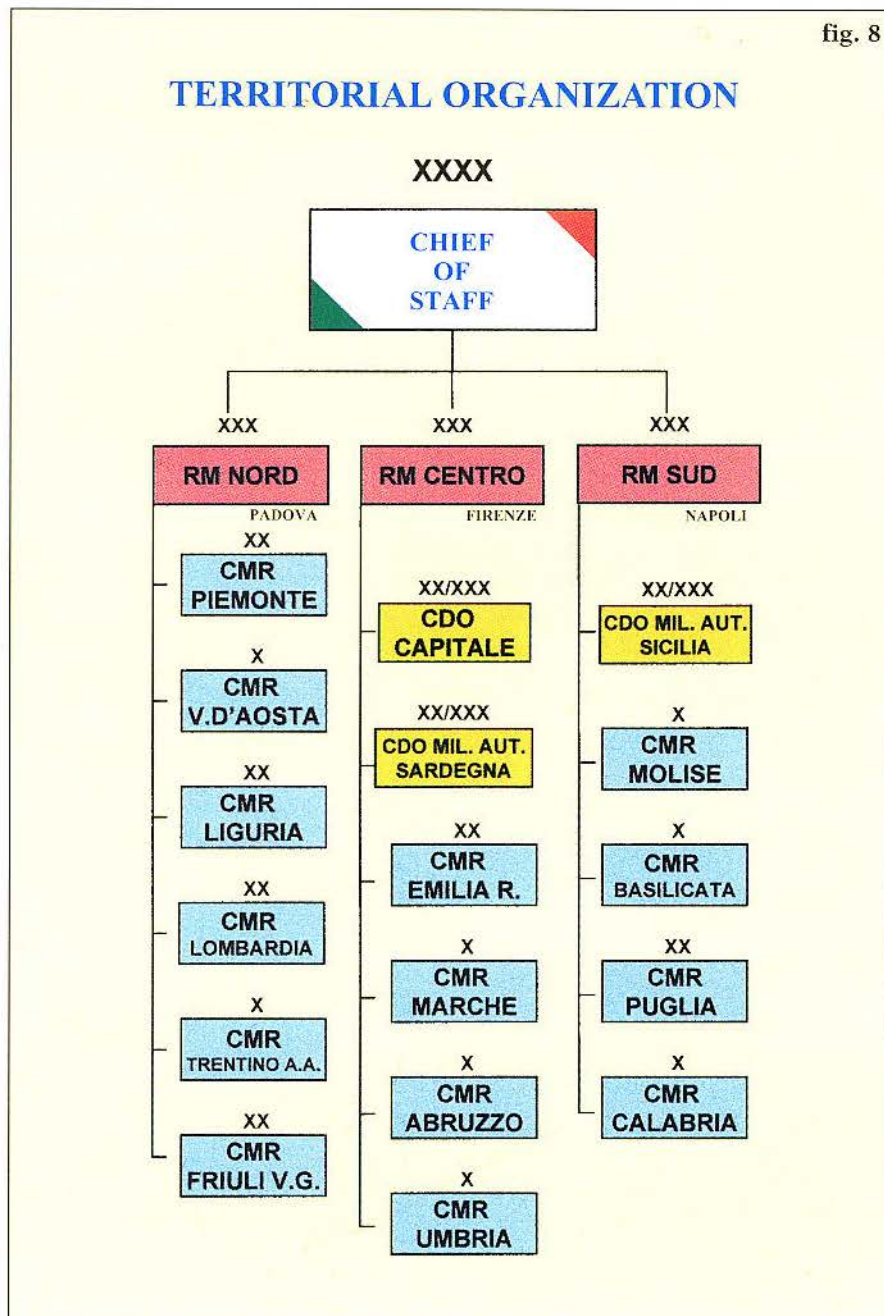
Based on these requirements, the reorganization project of the

sector -already started - envisages the reduction of the Military Regions from **seven to three** as a result of the following measures (fig. 7):

- dissolution of the North-West Military Region;
- transformation of the North-East, Tuscany-Emilia and South Regions, into North, Centre and South Military Regions, whose Commands - sharply reduced - will be located respectively in Padova, Firenze, and Napoli;
- reconfiguration of the Sardinia and Sicily Military Regions, which will become Autonomous Military Commands (respectively subordinate to the Commanders of the Centre and South Military Regions). The Central Military Region will become the Capital's Command, subordinate to the Commander of the Centre Region.

The new Military Region Commands will transfer their operational and training responsibilities to the Intermediate Operational Commands, and those connected with logistic support to the Area Logistic Commands (to be examined later); they will maintain their functions in connection with garrison activities, military property, infrastructure, medical and administrative services, as well as the responsibilities related to conscription, recruitment and mobilization.

Consequently, also the present organization of the Regional Military Commands (fig. 8) will be revised, with the objective of releasing the Operational Command (Intermediate and Brigades) from any garrison tasks, establishing, in each Administrative Region, an autonomous Regional Military Command, either "centred" on the Military Region Command itself or on a School organization. The "new" Regional Military Command will function as reduction gear of the Regional Commands, in all the sectors of responsibility of the latter, with particular reference to garrison and



infrastructure issues.

REORGANIZATION OF THE LOGISTIC AREA

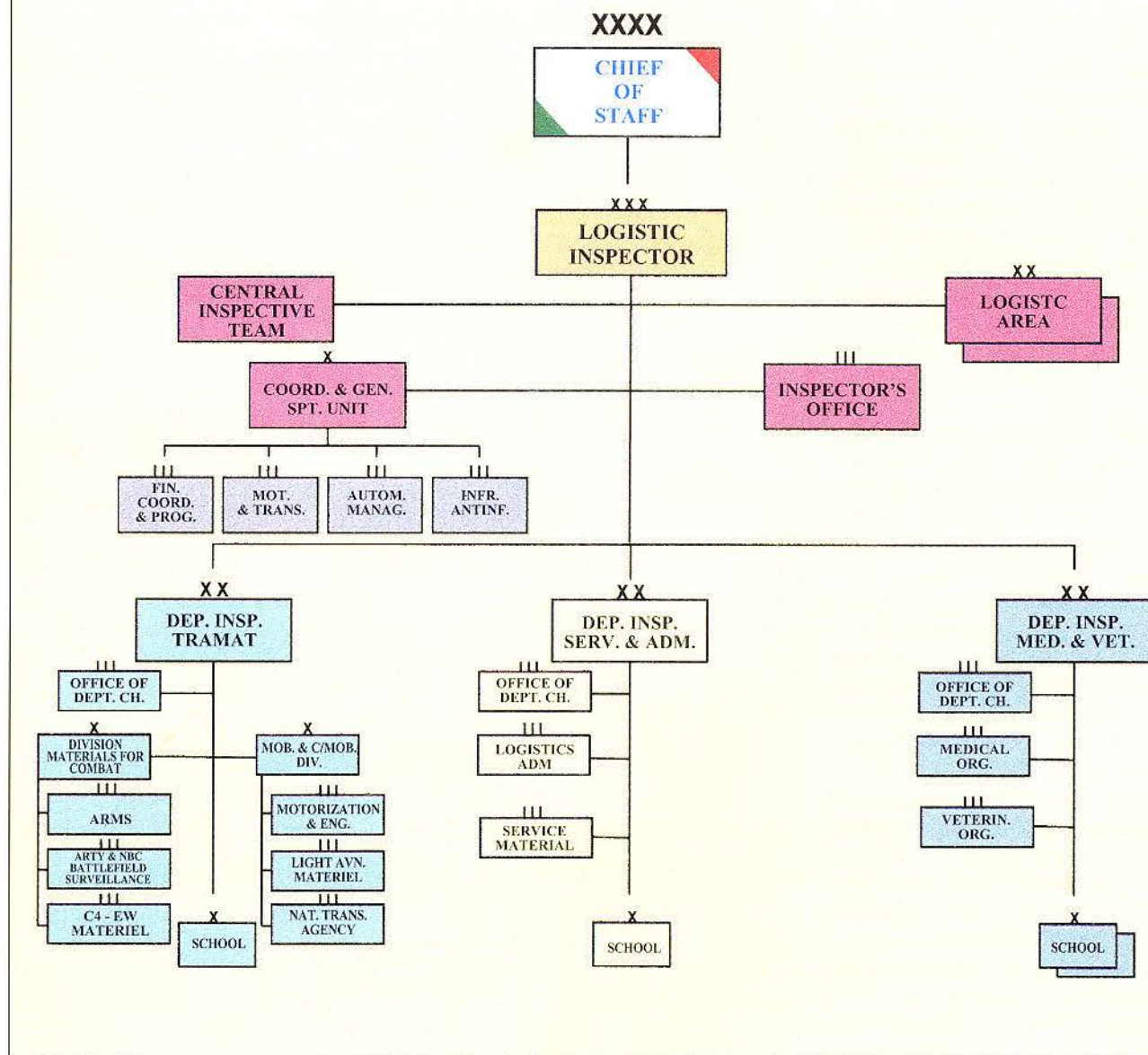
One of the functional sectors which have been thoroughly revised is certainly the logistic component, which is going through a deep transformation, due to the transition from a static structure, largely rooted in the territory and aimed at clearly defined possibilities of employment, to a streamlined organization, with an integrated

chain of Command and Control, efficient and well defined, ready to support the manifold missions that can be assigned to the Service today.

The preexisting situation, as a matter of fact, did not meet the criteria expounded above, in that:

- at central level, the concentration in the 4th Division-ISPEL of the managerial and programmatic responsibilities implied, on the one hand, an objective difficulty in the management of the assets and, on the other, a duplication

SUMMIT STRUCTURE OF THE ARMY LOGISTIC ORGANIZATION



of the line of subordination of the Logistic Commands and Corps, which were connected to the Chief of the 4th Division - ISPEL only from the functional point of view, while they were directly subordinate to the Army Chief of Staff for all the issues related to personnel, discipline etc.;

- on the territory, the division of the capabilities between Military Regions and operational Commands (Corps and Brigades) hindered the rational management of the logistic

activities, with consequent waste, excessive time spent examining requests, redundancy of some stocks, accompanied by chronic shortages in others, besides difficulties in the management of operations concerning units from different Military Regions.

The requirements of the new strategic picture, together with the need to achieve substantial savings - both structural and managerial - as well as the necessity to follow the criteria laid down in the reform

of the Military Summit, have emphasized the urgent need to:

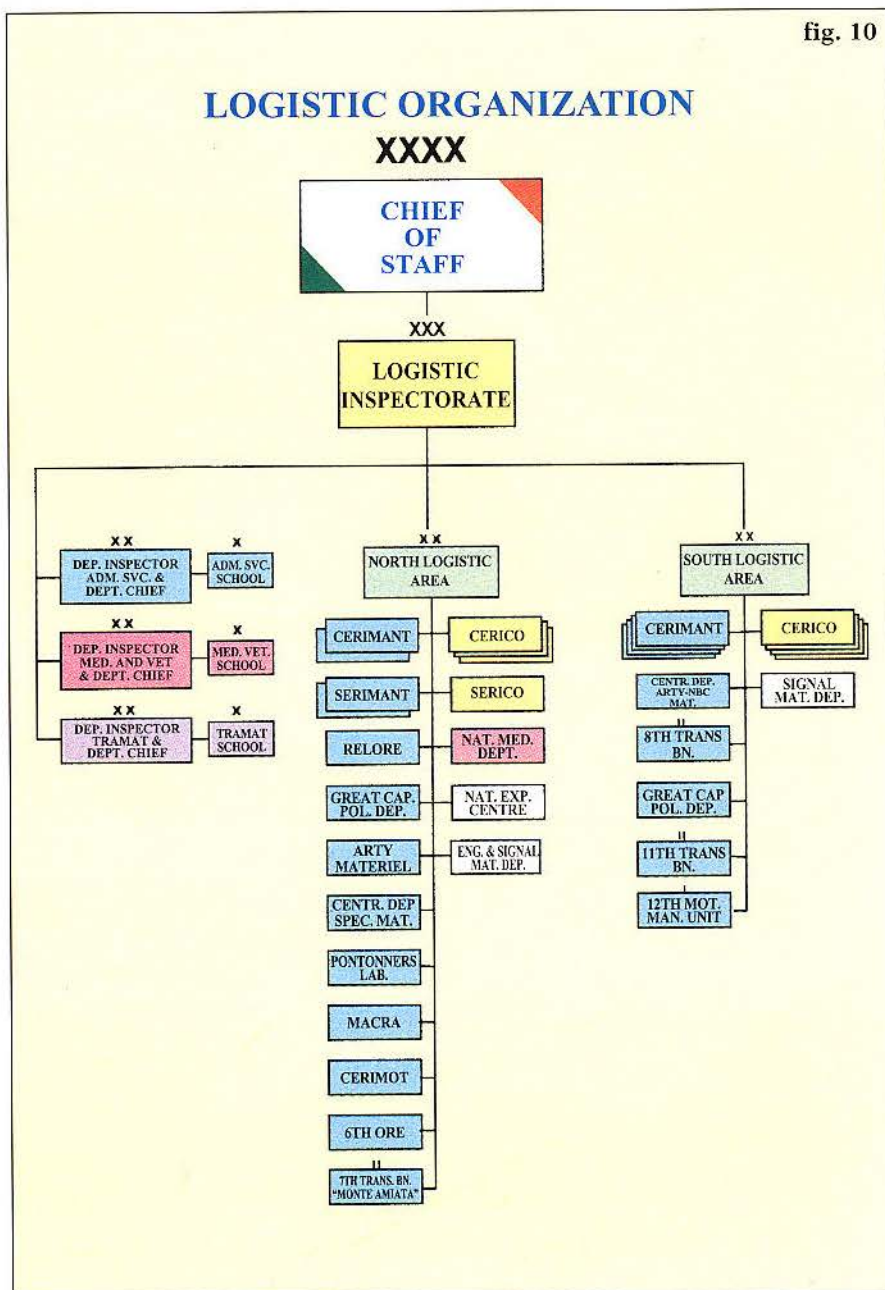
- reorganize the logistic structure in a reductive sense, considering a more slender functional chain, based on a largely automated command and control system;
- proceed to the functional and structural integration of the logistic services operating in "bordering" sectors, and which have significant overlaps as, for instance, Service Corps and Administration;
- reduce the member of logistic

units, joining them together in a few maintenance and/or supply bodies - with areal responsibilities - and a limited number of national poles, "oriented" to the supply and maintenance of specific weapon systems.

- grant high flexibility to the whole system, so that it can adapt to very different operational situations, with particular reference to the "adherence bracket", destined to face frequent projections of out-of-area forces, with a remarkable extension of the "supply arm".
- ensure, also through an accurate control of the expenses, a balanced management of the resources destined to the operating expenses, employing computerized systems all the way down to the lowest levels.

In this perspective, it was decided to redefine the top of the Command and Control chain of the logistic organization: today there are three basic "actors", subordinate to the Army Chief of Staff, each with quite distinct tasks and responsibilities:

- the Logistic Support Division of the Army Staff, responsible for the logistic policy of the Army and the preparation of the financial programmes - together with the General and Financial Planning Division - in the sector of modernization and renewal;
- the Army Logistic Inspectorate, responsible for all managerial activities, both at central and territorial level; in the latter case, the Inspectorate avails itself of two Area Logistic Commands, which carry out the tasks previously assigned to the Military Regions, with the exception of medical support which is still attributed to the Military Region Commands, in view of a possible joint reorganization of the Medical Corps;
- the Command of the Operational Land Forces, whose Logistic Support Command manages the



logistic activities of the operational forces.

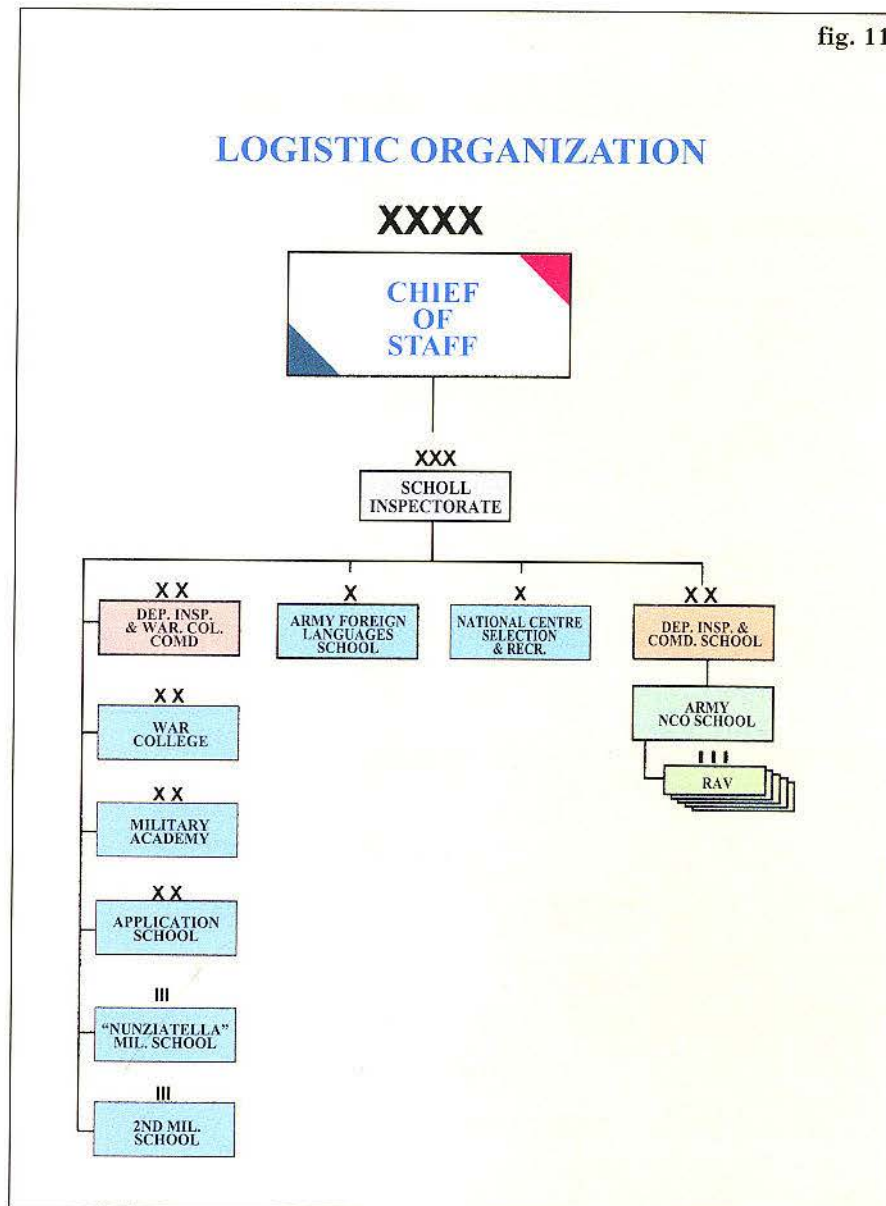
The reorganization started with the establishment of the Logistic Inspectorate, top body and sole responsible for the management of all activities related to maintenance, supply and transport. It consists of (fig. 9):

- Logistic Inspector and his Office;
- Coordination and General Support Division;
- three Departments, one for each functional area, namely:

Transport and Material, Administration and Service, Medical and Veterinary (deriving from the preexistent Corps, which have been abolished).

The logistic Inspector, in his organization, has also two Area Logistic Commands (fig. 10), which act as reduction gears, manage all the logistic units located on the territory, and are responsible for supply (depots, warehouses), maintenance (laboratories) and transport (different units); the latter will be

fig. 11



is that of changing from the policy which envisaged a through initial preparation with very few updating opportunities, to a permanent preparation, which is much more suitable for the employment of more and more composite and sophisticated training methods, and follows a complex road with qualification, specialization and professionalization stages, all aimed at equipping the personnel with a preparation adequate to the tasks entrusted to them. To achieve these results in a unitary vision, the whole School/Training sector has been placed under the command of the Inspector of the Army Schools, who avails himself of (fig. 11):

- a Deputy Inspector responsible for the training of officers; who is also the Commandant of the War College;
- a Deputy Inspector, who is also the Commandant of the Army NCO School, responsible for NCOs' and Volunteers' training; he will have under his command also five Volunteer Training Regiments.

In line with these project outlines, the School Inspectorate has taken under its command all educational establishments, including the War College and the National Selection and Recruitment Centre of the Army.

The Centre is the Army's organization in charge of the selection and recruitment of the young who voluntarily apply for admission to the formative courses for regular or reserve Officers, NCOs and volunteers, and can receive and select approximately 60,000 men a year.

Also the Service/Branch school sector has likewise been placed under the management of a sole responsible commander, the Army Branches Inspector, who avails himself of (fig. 12):

- Branches Inspectorate, established following the abolition of the former Inspectorates; the new organization has taken upon itself all training, normative and

integrated in a national transport agency.

THE REORGANIZATION OF THE SCHOOL STRUCTURE

The availability of Cadres and troops, well prepared and therefore up to the new tasks assigned to the Army, is a priority and an indispensable condition for achieving the objectives fixed by the "Army Project 2000". Within the framework of the Service's reorganization, therefore, the reconfiguration of the school/training area is of particular value, since there is the urgent need to update the

formation and training cycles of the personnel, considering:

- the doctrine's evolutions and the consequential procedures of employment of the forces;
- that the Army is required to carry out a wide range of tasks, some of which are completely different from the traditional ones (peacekeeping, peace enforcement, etc);
- the introduction in the Units of new "professional figures", such as the Marshals and long-term Volunteers, who carry out command duties at the lower levels.

A particular objective of the reorganization of the School area

inspective general functions;

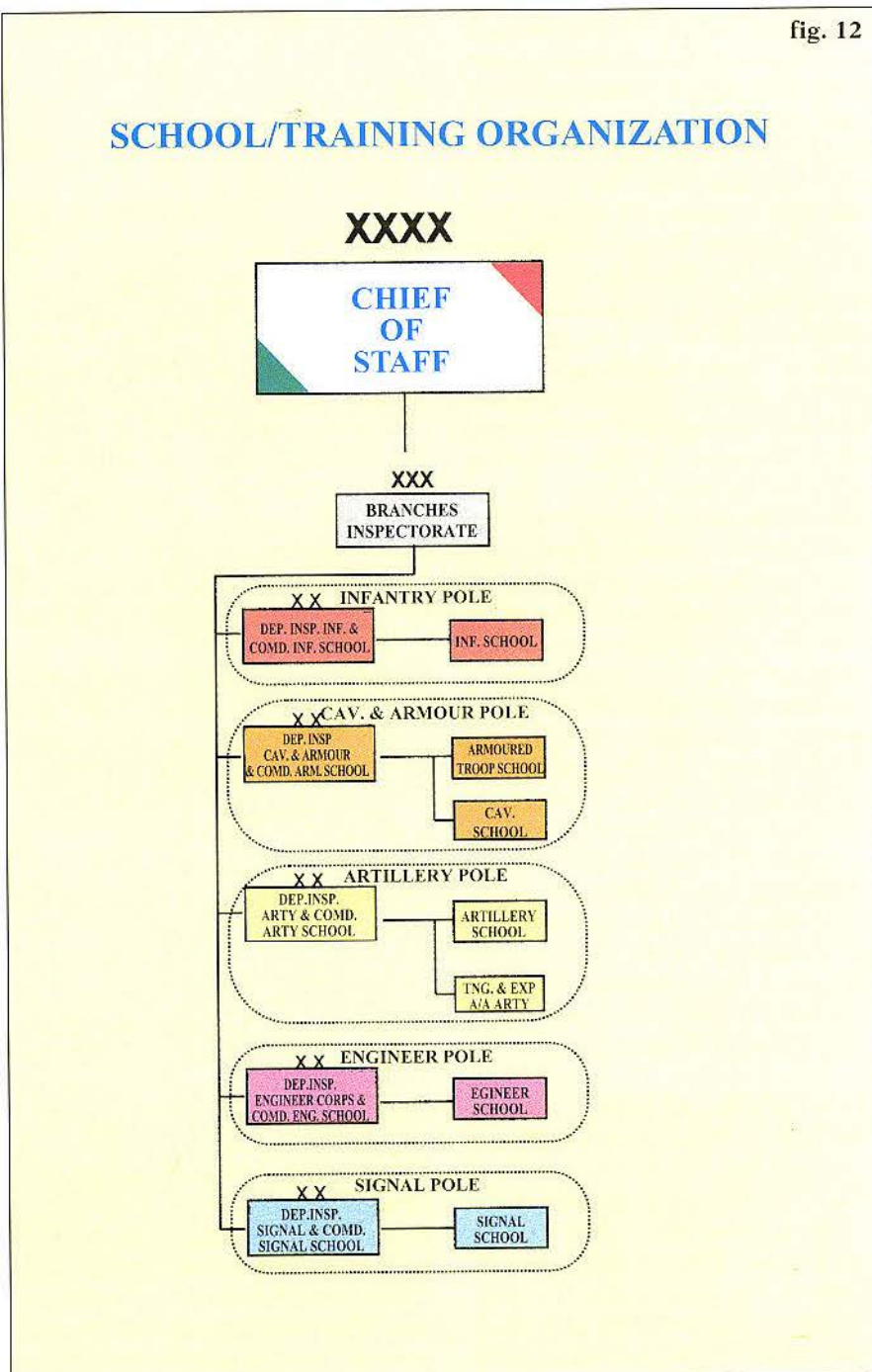
- five Deputy Branch Inspectors, coinciding with the Commandants of the respective Branch Schools.

Each Deputy Inspector is in charge of a specialization/qualification pole, namely:

- **Infantry pole**, under the Deputy Inspector of Infantry, centred on the Infantry School (Cesano);
- **Armoured Pole**, under the Deputy Inspector of Cavalry and Armoured Troops - established at the Armoured Troop School (Lecce) - which includes also the Cavalry School (Montelibretti);
- **Artillery pole**, centred on the Artillery School (Bracciano), which includes also the A/A Artillery Training and Experimentation Centre (Saubaudia), (resulting from the transformation of the Army A/A Artillery School);
- **Engineer pole**, coinciding with the Engineer School (Roma-Cecchignola);
- **Signal and Informatics pole**, resulted from the reconfiguration of the Signal and Informatics School (Roma-Cecchignola);

In substance, the aforementioned Deputy Inspectors:

- are the natural heirs of the Inspectorates, as far as "culture", traditions and "sense of belonging" to the Branch or Speciality are concerned, and function as centres for the elaboration and diffusion of the employment doctrine of the minor units, as well as of the relevant technical regulations;
- are responsible not only for the unitarian formulation of the guidelines for the preparation of Cadres and Troops, but also for controlling the correspondence of the school/training cycles to the general objectives fixed by the Army Staff, as well as to the requirements defined by the Commander of the Operational Land Forces;
- carry out training, qualification and re-training activities, for all



personnel (of all ranks) belonging to the various Branches/Specialities;

- are the forums for debates and seminars on particular operational and training experiences;
- carry out experimental and illustrative activities on new materials and weapon systems.

As regards the Army Aviation, (AVES), the preexistent Inspectorate

has been transformed in the AVES Command, located at Viterbo, and is subordinate, for its employment, to the Support Commander (COMSUP) of the Operational Land Forces Command. The AVES Command consists of:

- the Army Aviation Centre;
- the AVES units in support of the Operational Land Forces.

To complete the entire project, the reconfiguration of the Alpine Military School is under way - the

School was formerly subordinate to the 4th Alpine Corps (now Alpine Troops Command) - together with the restructuring of the Military Paratroop School, that will become the "Paratroop Training Centre", still subordinate to the "Folgore" Paratroop Brigade.

Finally, as regards the reorganization of the "logistic" Schools - now subordinate to the Logistic Inspectorate - similar reference parameters have been used, and the following poles have been established:

- **Medical pole**, centred on the Military Medical School, that will move from Florence to Rome, and whose Head will be the Deputy Inspector of the Medical and Veterinary Corps.
- **Administration and Service pole**, coincident with the Command of the Military Administration and Service School, subordinate to the respective Deputy Inspector;
- **Transport and Material pole**, centred on the Command of the Transport and Materials School, subordinate to the Deputy Inspector of the Transport and Material Branch.

EVOLUTION OF THE TRAINING ORGANIZATION

The Training Organization, directed towards the initial preparation of the recruit, consists at present of 25 Recruit Training Centres, at Regiment or Battalion level (RAR/BAR), attended by approximately 130,000 recruits. These units provide for the enlistment of the recruits and the connected activities, such as issue of uniforms, medical checks of all personnel, basic training.

The shape of the training organization has been revised, based on the decrease in the established strength of the troops (by the end of 2003 there will be 100,000 members, 40,000 of which volunteers and 60,000 conscripts) and on the following parameters:

MLRS multiple rocket-launcher during an exercise

- length of conscription no less than 10 months;
- gradual transition from the present situations to the final phase, in close relation to the trend in the enlistment of volunteers;
- selection of the BAR/RARs to be kept in operation, taking into account:
 - the availability of installations in good state of preservation and with good reception capabilities, as well as the existence of training areas/ranges at short distance from the garrisons;
 - the uniform distribution of training units on the national territory, in order to achieve the highest possible rate of regionalization of the military service.

Once the reorganization programme is completely implemented, the Army will control a Training Organization of 18 BAR/RARs, 5 of which will be in charge of the initial preparation of volunteers (men and women) and 13 for the enlistment/training of conscripts.

Moreover, to reduce the effects of the reduction of conscription to 10 months, a system for governing the turnover in the units has been realized. It overcomes the traditional division of conscription into "instruction and operational periods", and moves on to a training/operational formula to be completely developed at unit level. To this end, four BARs have been attributed the functions of "Conscript Enlistment Centres", where the recruits stay for the time strictly necessary (maximum 10 days) to carry out the activities connected with the enlistment, and then they join the units, where they carry out all training phases.

The effect of this measure is that the regiment of the basic branch, whose employment is envisaged by



battalion modules, will always count on 100% of the operationally employable force, while the remaining tactical/logistic support units will have, at all times, an operational manpower of 70-80 % of the established strength.

CONCLUSIONS

The realization of the "Army Project 2000" is an event of exceptional importance for the Service. It is an extremely complex operation that, starting with the reform of the Higher Ranks, has



involved all components, down to the system of recruitment of conscripts.

In fact, doubtlessly, in order to change an instrument, which was built for the defence of frontier and territory, into a force capable of rapid deployment outside the national borders, and capable of participating - on a plane of qualitative parity - in multinational cooperation, it was necessary to undertake a radical transformation of the Service's organization.

The "Army Project 2000" is therefore marked by austerity and

rigour and it affects, albeit in different measures, all components of the Army, with the foremost objective of streamlining the territorial command structures, as well as those entrusted with the logistic/administrative support. This was a compulsory choice, in that the only alternative was a further reduction of the Operational Forces which, we must remember, have been affected, almost exclusively, by the great reorganizations of the Army. Suffice it to mention a significant fact: from 1989 to this day the

number of Brigades has gone down from 25 to 13, whereas this drastic reduction was not accompanied by proportional contractions, neither in the Territorial Organization nor, even less, in the Logistic Corps and Services.

As a consequence, at the present stage of the Army's reorganization (which - among other things - must reduce, the number of Officers by 25%) it becomes inevitable to cut into the above sectors, also to achieve an harmonic balance among the different components of the Service, in line with objective criteria of rationalization of the structure and optimization of the available resources.

Ultimately, every possible effort has been made to build a realistically sustainable military instrument, safeguarding the Operational Forces - which are the very *raison d'être* of the Army - ensuring them, with the synergic contribution of all other components, a standard of efficiency and operational readiness adequate to face the large and diversified range of tasks that the Army is carrying out and will very likely be required to perform, both in the national environment and in the wider - and more demanding - international context.

□

**Colonel,
Head, Forces Organization
Office,
Army General Staff*

***Lt. Colonel,
Chief, 1st Section,
Forces Organization Office,
Army General Staff*

(1) The Division will assume these tasks and this structure immediately after the approval of the Implementation Decree of art.10 of Law 25/97 (Reform of the Military Summit)



OPERATIONAL PLANNING IN MULTINATIONAL CONTEXTS

by Pier Paolo Lunelli *

PARALLEL PLANNING

Actually the **process of parallel planning** (a NATO term) among various command levels is nothing new. It derives from the Warning Order (WO) concept which is in fact a link of the planning cycle chain, because it supplies the subordinate command with the basic elements sufficient to start a similar cycle at its level. It is applied not only in the conduct phase but also in contingency planning. **The parallel planning model**, illustrated at fig. 1 for

didactic purposes, includes in this specific case an operational level (a Combat Joint Task Force - CJTF, employed in Art. 5 operations, a Land Component Commander - LCC) and several tactical levels (1) (Corps, Divisions, Brigades, Battalions). Although this model lacks the other components (air and maritime) the process applies also to the latter.

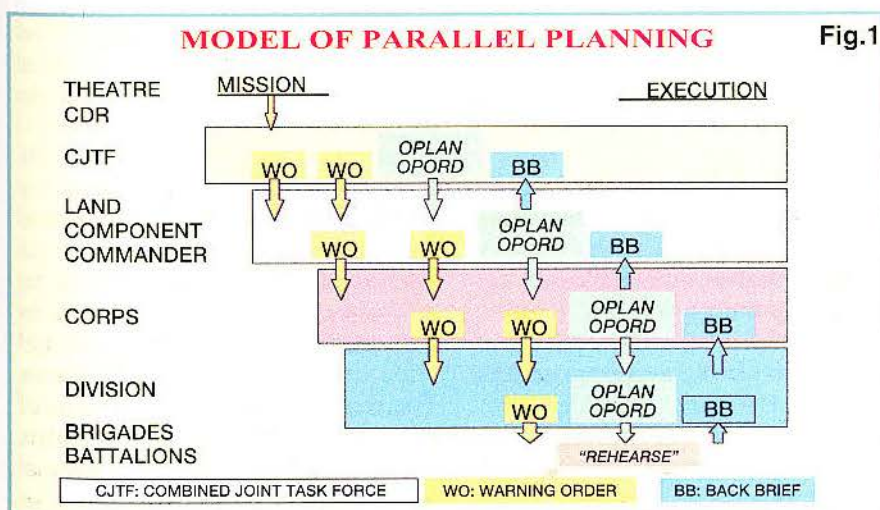
This process can be explained as follows:

- **CJTF.** The Combined Joint Task Force (CJTF) Commander receives the mission from the

Theatre Commander and issues a **Warning Order (WO)** for the Land Component Commander. This Warning contains, at least, the CJTF mission together with additional information elements. Other Warning Orders can be issued later on, as the situation becomes more clear. The CJTF Commander's final act will be to issue the Operation Order (OPORD) or, according to the situation, the Operation Plan (OPLAN). Such Warning Orders which, as we shall see in the third part, are an output of the

Finished is the era in which everybody had to be able to do everything. The planning activity for the employment of technologically advanced weapon systems, the management of the media and the relations with civilian organizations, emphasizes the need for a specialization of tasks and functions. Staff activity increasingly requires the contribution of personnel with specific experience obtained along the years in national, joint and international environments. Nevertheless, working methods are the same as before. Despite that, “brainstorming”, i.e. a free spontaneous discussion trying to find and reelaborate new and useful ideas for the solution of problems, appears quite significant. This method particularly develops lateral thinking (typical of intuition and inference), in support to vertical thinking (typical of logic-analytical reasoning).

The following work is only the first part of a series of articles concerning the complex problems of operational planning. The ensuing two installments shall deal with the essential concepts regarding the planning sequence and phases, with special attention to peace support operations.



operational planning process, are: the Mission Statement, the Commander's Initial Intent, the Operational Concept and others;

- **LCC.** At Land Component Commander's level, the first Warning Order received triggers off an internal planning process which produces its own WO destined to the Corps. In particular, the model described shows that the second WO is sent out upon reception of the OPORD/OPLAN by the CJTF. The CJTF Commander, before the Land Component Commander

delivers his own OPLAN/OPORD, demands the so-called **back-brief (BB)** i.e. he makes sure that the mission has been understood and that the operational concept is in line with his orders before they are issued. At Air Component Commander and Maritime Component Commander level the process is similar;

- **Corps-Div-B.de.** At Corps, Division, Brigade and Battalion level the process is repeated with similar patterns. The only difference is that the lower levels must be allowed the time to make the so-called **Rehearsal (2)**, i.e. to verify the feasibility of their Operation Order/Plan through an exercise for Command Posts (partial rehearsal) and/or with the troops (full rehearsal). The choice between the two abovesaid forms depends essentially on the time at one's disposal.

It can be said, therefore, that the process of parallel planning enables the various command levels **to make the most of the time available for planning**, thus avoiding that the final executor lacks the necessary time. The back-brief, moreover, creates further synergies, giving the process a unitary character.

The **golden rule, universally adopted is called 1/3 - 2/3**. This means that each Command level can use only 1/3 of the time available for carrying out its planning, leaving the remaining 2/3 to the subordinate level. Indeed this rule tends to reach the values of 1/4 - 3/4. The estimate of the times can be made with a bottom-up procedure, keeping in mind that a platoon commander, or equivalent level, needs 2-4 hours to plan his action.

At this point, there are a few questions that rise spontaneously: *"How can the Commander plan anything if he has only scarce or insufficient information? How can he properly examine the situation if he ignores the size of the forces*

and/or support available?"

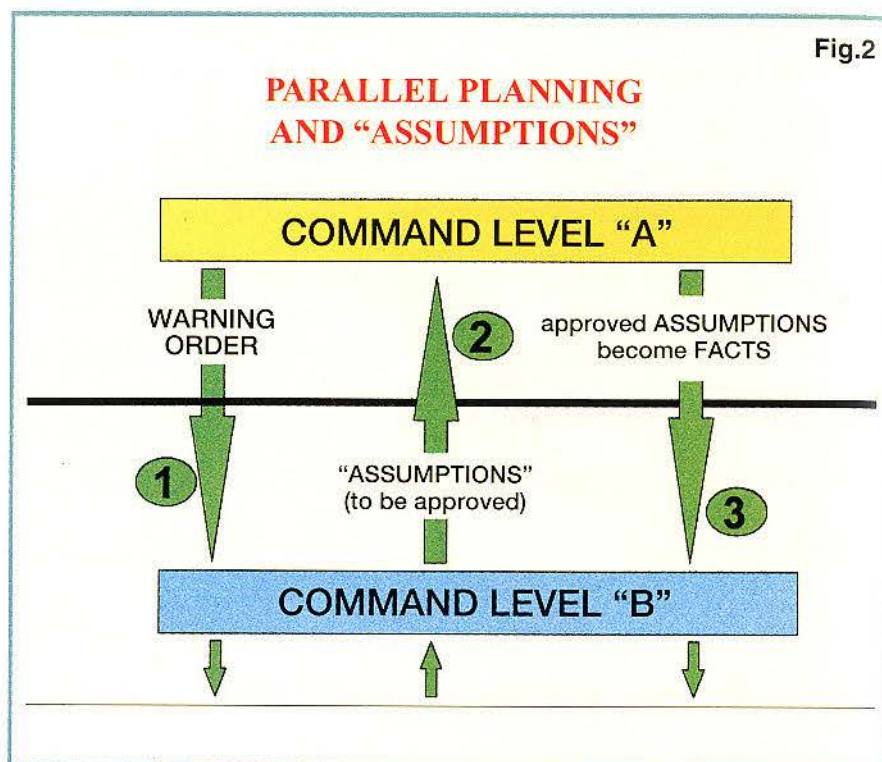
Well, a Commander who carries out on his own the analysis of the mission, who writes in his own hand the directives and the operational concept, who has the ability to envisage the activities necessary for carrying out his mission, will replace facts or information, which are not yet available to him, with **assumptions (3)** (hypotheses of planning, reasonable inferences derived from the analysis of the situation).

Fig. 2 shows, as an example, two levels of command, one subordinate to the other.

The level "A" Command issues a Warning Order to level "B". The level "B" commander directs his staff according to the following elements:

- **Facts.** obtained from the information available regarding situation, friendly and enemy deployments, available forces, operational capability, logistic support, etc. The mission received, the higher Commander's intent and the Warning Order should be considered facts;
- **Assumptions.** (hypotheses of planning), when "facts" are not

Fig.2



available and to avoid planning in a "vacuum". In particular, the assumptions formulated at the higher level should be accepted as such also by the lower level only if they are related with the level's own mission. Otherwise they are to be accepted as facts until the contrary is proved. Assumptions, without which often the planning process cannot be properly carried out, generally regard subjects, situations and areas outside the Commander's scope.

Still at Fig. 2 it is shown how assumptions are brought back to level "A" through the back-brief (BB) previously illustrated, or listed in the OPLAN-OPORD draft. As can be seen in the mentioned figure, once the level "B" assumptions are approved by level "A" they can be considered "facts", i.e. sure elements of a situation. Nevertheless it should be stressed that only the assumptions important for the higher level should be approved by the latter. For instance, during the phase of projection of a force in a Theatre, the Commander of the operational level can perceive the need to

establish an airlift crossing the airspace of a neutral nation, therefore he can "assume" that the said nation will give permission to fly over its territory. The higher level, acknowledging this, takes the necessary diplomatic steps and, once it obtains the authorization, the assumption at operational level becomes a "fact", i.e. a sure element of the situation.

In peace support operations, a mandate of the Security Council of the United Nations, or a cease-fire agreed upon and implemented by the opponents, can be considered assumptions.

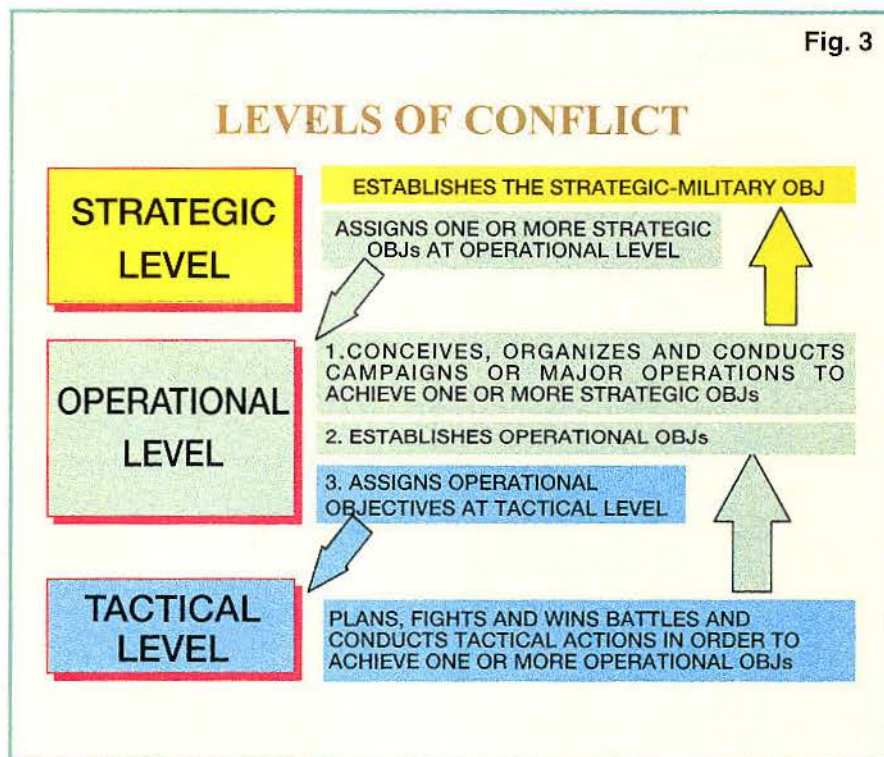
In any case, assumptions must be plausible, necessary and realistic. Listed at the beginning of the plan, they are generally the outcome of an iterative process, carried out through the analysis of the mission. Although assumptions are an integral part of Contingency Plans, nevertheless they should not be inserted into Operational Plans or Operational Orders.

THE LEVELS OF CONFLICT (also called levels of war)

The **levels of conflict** are certainly better known as levels of war, as they are defined in the Allied Tactical Procedures (ATPs) and in the Allied Joint Procedures (AJP-1). As they find their natural collocation also in peace support operations, from now on we shall speak of levels of conflict instead of levels of war, being understood that the first term includes the second.

The levels of conflict (4) are therefore doctrinal aspects which link the strategic goals to the tactical actions, in that they facilitate the commanders in the cognitive process aimed at visualizing the logical flow of the operations, assigning tasks and relevant resources.

It should be pointed out that each level (5) is defined by the effects and results that it intends to obtain and not by the number of the



Commander's staff, type of units or forces.

The logical-functional relations among the abovementioned levels are pointed out at Fig.3. The yellow, green and blue colours indicate respectively the strategic, operational and tactical levels and the relevant activities that interpenetrate each other: As can be noticed, to realize the connection among the various levels, the strategic level assigns the strategic goals to the operational one and the operational level assigns the operational goals to the tactical one.

In particular:

- **the strategic level is that in which a Nation or a group of Nations forming a coalition or an alliance define strategic goals of security** - suggested by national and/or common interests - **and contribute the necessary resources to attain such goals.** As a rule, the level of the Minister - Chief of Staff of Defence - Military Committee of the Alliance level is of the strategic kind. Nevertheless, it must be pointed out that this level can be divided into **Politico-Strategic level** (Grand Strategic for France and Great

Britain) and **Military-Strategic level** (Table A);

- **the operational level is the link which connects the strategic goals with the tactical employment of the forces.** At this level the employment of military force is envisaged in order to attain these strategic aims through campaigns (6) and major operations (7). In particular, Liddel Hart explains: *"The operational level supplies the vital link between the strategic-military goals and the tactical employment of the forces on the battlefield through the conception, planning and execution of major operations and campaigns"*. **The command level related to the conflict level** depends on the nature of the conflict itself, the strategic goals pursued, the dimension and structure of the Theatre and the amount of forces involved. Eventually, the Commander of a Corps can be appointed Land Component Commander (LCC), thus his level can become operational if it aims at achieving strategic objectives;
- **the tactical level proposes to**

TABLE A

THE LEVELS OF CONFLICT IN THE ALLIED DOCTRINES (UK and US)

The British doctrine recognizes four levels of conflict (8):

- **Grand Strategic.** "Grand Strategy" is the employment of the national resources in order to achieve objectives of military-policy. These resources include not only those relevant to the military instrument, but also those of a diplomatic and economic character. The "Grand Strategy" is conceived at government level, whether it acts autonomously or in the framework of international organizations such as the U.N., within a treaty like the North Atlantic one or in a coalition, such as that which took shape for the Gulf War. In short, the "Grand Strategy" defines the objectives on the basis of the Government's policy, provides the resources to achieve these objectives and imposes the limitations and restraints which are deemed necessary (e.g. Rules of Engagement - ROE), without discussing the manner in which these resources will be spent.

- **Military Strategic:** Military Strategy is the employment of the military resources to achieve the objectives of the "Grand Strategy". Therefore, "Grand Strategy" and Military Strategy, together, aim at achieving political objectives. In particular, the Strategic-Military Authority (9): decides which are the campaigns to be conducted; defines the End State; points out restraints and limitations of a political, economic or legal nature; allocates resources and forces; establishes the command and control structure.

- **Operational level:** Joint campaigns and major operations are conceived and directed, at operational level, on the basis of a strategic directive. The operational level includes the command level of the Force (Joint Force Commander) and that of the land, naval and air components (Joint Force Component Commanders - JFAAC, JFLCC, JFMCC and JFSFCC).

- **Tactical level:** Battles and tactical actions are conducted at tactical level in order to attain the operational objectives of a campaign.

In short, while the Strategic-Military Authority defines the objectives, assigns the resources and fixes the employment restraints, the operational level issues the orders at tactical level, based on its own Campaign Plan. Finally, it must be noted that two of the four levels are on the strategic plane.

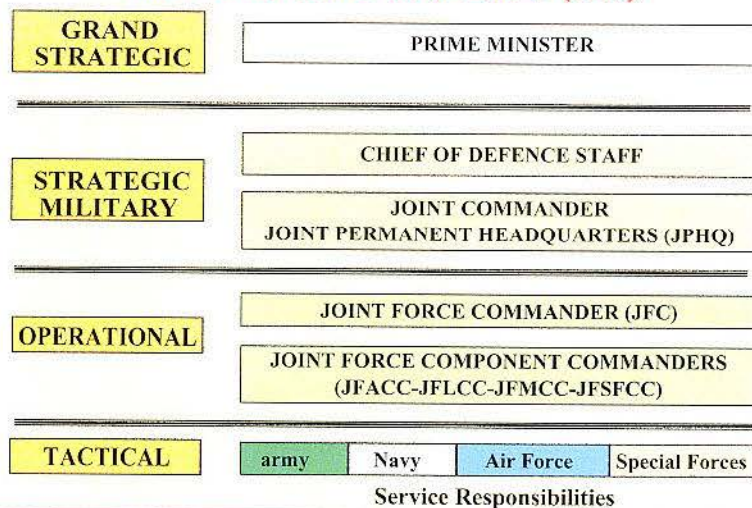
The French doctrine is similar, albeit with some variations.

The U.S. thought (10) considers instead the three classic levels of war (not conflict), among which the previously outlined political level, corresponding to Grand Strategic, is missing.

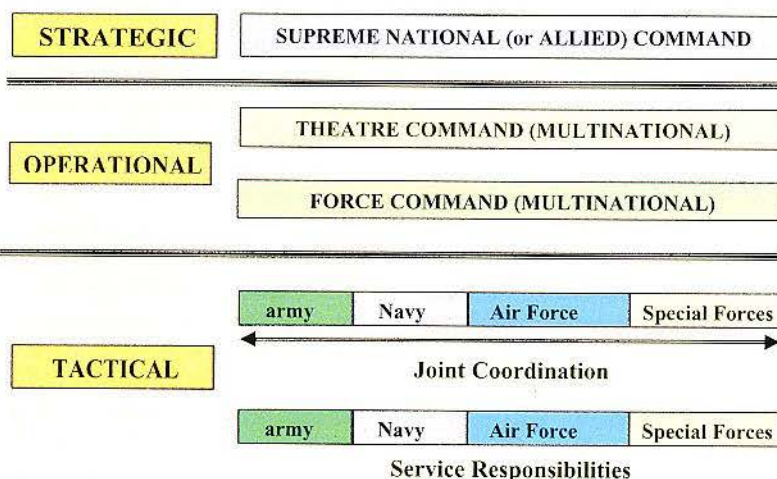
It must be underlined, however, that the Chief of the Defence Staff (strategic level) develops, on the basis of the interests of national security and of the objectives set by the President of the United States, the National Military Strategy. At this level the military requirements are defined, and the resources for achieving the objectives of the aforesaid Strategy can be employed.

In fact, the difference between the two doctrines is minimal, in that here the Grand Strategic is implicit, and corresponds to the President of the United States of America - National Security Council.

LEVELS OF CONFLICT (UK)



LEVELS OF WAR (UK)



attain operational objectives through battles (11) and engagements (12). At this level the units are directly engaged in combat.

A single strategic concept tends not only to synchronize the actions carried out at every level, be it strategic, operational and/or tactical, but also defines if these actions are to be carried out jointly or in sequence.

The scheme at Fig. 4 illustrates the hierarchy of the conflict levels in multinational joint operations and the relevant activities. While at strategic level we speak of military strategy of the Coalition and/or of Theatre strategy, at operational level the activity carried out is called campaign/sub-campaign planning. On a lower plane, the tactical level conducts and plans battles, engagements and actions.

Actually the three levels cannot be considered as separate, but intersecting each other.

The British line of thought, of which Gen. Ash Irwin (13) is a precursor, points out that the operational level:

- does not refer only to large-scale armed conflicts;
- represents the connecting link between Strategy and Tactics, i.e. it links these two elements, creating areas of superimposition and redundancy;
- is not bound to any particular level of command.

The definition suggested by Liddel Hart implies the concept of sequencing (of operations) which proves the distinction between **battle** (tactical level) and **campaign** (operational level).

A campaign is in fact a correlated sequence of major joint operations which confers a unitarian character to the tactical, operational and strategic actions; its end is to attain strategic goals within preestablished limits of time and space. It is generally divided into phases, each characterized by an End State, which has the function of

assessing the success obtained.

In particular a Campaign:

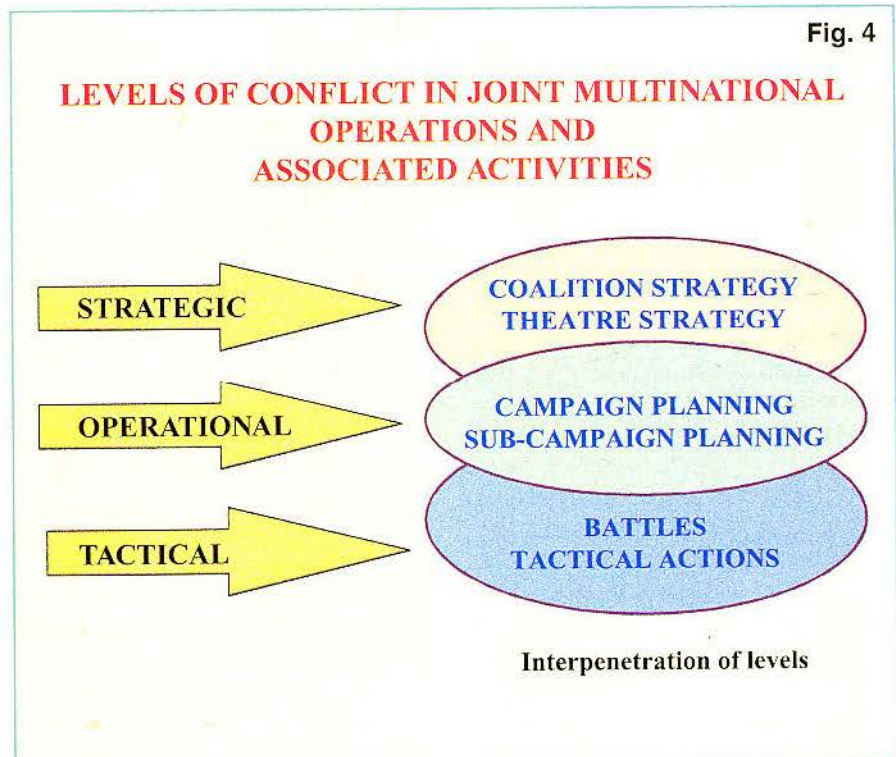
- is directed against the enemy's Centre of Gravity (14);
- is based on the combined and synchronized employment of all land, maritime, air and space assets, special forces included;
- clearly defines the End State, i.e. what materializes the success, the conclusion of a mission or the strategy for withdrawing the forces from the operational Theatre;
- is the basis for the subordinate commands' planning;
- at strategic level, gives a unitary character of jointedness to the stages of mobilization, force's projection in the Theatre, employment and support to the forces, including also the campaigns and operations conceived and organized by the subordinate Commanders of the land, maritime and air components (JFLCC-JFMCC-JFACC).

The outcome of the campaign/sub-campaign planning is the campaign/sub-campaign plan, which transforms the strategic concepts in military action plans and indicates how operations,

logistic support and available time will be employed to achieve the strategic goals.

The levels' description could give the impression that each level constitutes an entity separate from the others. In reality this distinction rarely appears clearly.

As a matter of fact, Fig. 4 shows that there are no pre-defined boundaries but rather an interpenetration between the conflict's levels and the activities connected with them. This means that an operational Commander could eventually be called to perform some functions typical of the strategic level, and, similarly, a tactical Commander may have operational responsibilities in certain situations, and tactical ones in others. It is nevertheless important to consider that the activities carried out at one level can have direct consequences on the other levels. Edward Luttwak describes this as "interpretation of the levels of war", meaning that the harmony among levels leads to success while discordance denies it, and a mistake made at a lower level reduces the probabilities of success of the higher one.



To sum it all up, the achievement of all tactical objectives realizes the operational objectives which in their turn concur in attaining the strategic goal, everything in a joint setting.

There are several reasons for this interpenetration of levels. In fact, the employment of precision weapon systems (i.e. smart bombs), of intelligence and communication systems and the media's dimension could eventually permit to conduct tactics from the strategic level, as in fact Hitler and Churchill did during WWII, or Johnson during the Vietnam war (1965-68). President Johnson, actually, used to make his decisions every Tuesday during a working lunch. He controlled air operations, even pointing out targets, times and type of ammunition, thus centralizing not only the strategic decision but also the operational and tactical ones. The consequences were a lack of flexibility at operational and tactical level and an inadequate cost-benefit ratio. Finally, the interpenetration among levels becomes of particular importance in multinational operations because the forces belonging to various Nations have always a high political value, also when, for numerical reasons, they have a limited importance from the tactical point of view.

According to current British thought (15), **three questions help to establish whether an action has a dimension appropriate to the operational level:**

- **has the action a political dimension?** In conventional operations a political decision can have direct effects on the envisaged action. In the Falklands/Malvinas war, the political decision to attack Goose Green can be considered an action at operational level because it was prompted by political directions, and so was



Volunteers in a firing exercise with the "AR 70/90" individual weapon at Aosta's Alpine Military School.

the release of the hostages on the "Achille Lauro". Similarly, the command of the contingent in the recent operation in Albania had an operational dimension.

- **can the action have a decisive influence on the general situation of the campaign?** The employment of airborne troops in Normandy, the landing at Inchon and the German offensive in the Ardennes are clearly three examples of actions at operational level. And again the air attack on Port Stanley with aircraft coming directly from the motherland, although it did not change the tactical situation in the Falklands, proved the capability to strike at a distance of 12,000 Km; and a direct

consequence was that units of the antiaircraft defence were withdrawn from the islands in order to protect Buenos Aires, thus weakening the Argentine Centre of Gravity.

can the action directly contribute to acquire the strategic objective? The US decision to employ the "Patriot" missile system against the SCUDs in Israel, during the Gulf War, concurred to the achievement of the political aims of the campaign, because it prevented Israel's intervention in the conflict. Such intervention, in fact, would have endangered the cohesion of the Arab coalition, a long-time adversary of Israel.

Moreover, two further remarks are necessary (16):

- **the operational level is joint by definition (often the contrary is also true);**
- **in a coalition, as we have**



already said, the employment of forces belonging to different nations may have a political aspect, even if tactical actions are carried out. Particularly, the ACE Rapid Reaction Corps (ARRC) and the ACE Mobile Force (Land) [(AMF(L)], as multinational formations directly subordinate to SACEUR, are able to operate both at operational and tactical level, according to the situations, the strategic environment or the phase of the operation. The AMF(L) can actually be considered at operational level when it is employed to "show the flag" and at tactical level when organized within a Corps. Similarly, the ARRC could work at operational level in non-Art.5 missions until a Combined Joint Task Force is constituted and deployed, or employed as Rapid Reaction Corps, subordinate to a Principal Subordinate

Commander (PSC), to conduct a counteroffensive operation. Moreover it is acknowledged that the ARRC, in the Bosnia-Herzegovina operation (1995-1996) held the operational level both because the Commander was de facto Land Component Commander and owing to the multinational character of the operation.

THE END STATE AND ITS CONNECTION WITH THE GOALS

When the political establishment of a Nation or coalition of Nations decides to employ the Armed Forces for an operation it should first of all define the **End State**. It is envisioned as a **state or situation to be reached** and therefore it can have a connotation of time, space or situation. When this parameter is not defined, the Armed Forces risk being employed in a permanent manner, with the mere function of support to other institutions.

The detection of the status or military situation which achieves the success related with the strategic goal (End State) derives from the analysis of the situation and is the basis for defining the operational objectives to be entrusted to the tactical level.

The End State concept is an integral part of the so-called "Battlefield Visualization Concept" (17). This is a **process** through which the Commander:

- develops a clear knowledge of the existing situation in connection with the enemy and the environment;
- finds out the desired **End State**, which represents the accomplishment of his mission;
- visualizes the sequence of the activities necessary to conduct his forces **from the existing situation to the End State**;

The inability to define the End State and clear operational

objectives to be assigned to the subordinate level is a factor of failure. For example, during the Allied invasion of Italy in 1943, Marshal Montgomery wrote: "... *I was ordered to invade Europe, without adequate resources and without receiving any objective ... the decision to invade Italy has embarked us in a campaign, having no idea or plan on how it would develop ... the whole business proved itself a less than clear activity ... of typically British derivation*". The decision to isolate Italy and to divert German forces from other fronts, besides generating confusion, was not in fact accompanied by an adequate allocation of resources.

On the contrary, in 1943, Gen. Eisenhower, Supreme Allied Commander, received clear strategic guidelines, which nevertheless concerned only a *short-term End State*: "You will enter into continental Europe together with other Allied Nations conducting operations so as to strike at the heart of Germany and destroy its Armed Forces". Such End State, based on Germany's unconditional surrender, lacked a long-term vision, i.e. did not take into account the consequences on the future balances in Europe, which led to the "cold war".

Not always the strategic level is in a position to define in writing the End State and the strategic directives, due to the distance of the operational Theatre or, more often, for incompetence. In this case the operational Commander can suggest them in a draft, as Gen. Schwarzkopf did in operation "Desert Storm" (18): "the British wanted the U.S. Secretary of State to define the political and strategic aims of the coalition ... Thus I instructed the Head of the Military Policy Plans Office to prepare a draft which was modeled after the one issued by Eisenhower in February 1944".

The draft, divided in three parts, envisaged:

Interaction between men and equipment is fundamental for success in any operation.

1.TASK. To conduct operations in order to compel the Iraqi forces to withdraw from Kuwait in accordance with the resolution of the UN Security Council. If necessary, on order, to conduct military operations for destroying the Iraqi Armed Forces, free Kuwait and restore the legitimate government...

2.AUTHORIZATION. On order, you are authorized to conduct operations on Iraqi territory and the adjoining seas, to free Kuwait and destroy the Iraqi forces that threaten Saudi Arabia. The forces must be able to start the operations no later than february 1991. If the Iraqi forces were to attack Saudi Arabia, you are authorized to conduct land, air and naval operations in Kuwait and Iraq, in their air space and territorial waters.

3.OPERATIONAL DIRECTIVES. The goals of your offensive campaigns are: (1) to destroy plants capable of nuclear, biological and chemical production and the relevant weapon systems; (2) occupy the southeastern part of Iraq until the strategic objectives have been achieved; (3) destroy and neutralize the Republican Guard; (4) neutralize and disarray the Iraqi Command and Control system; (5) degrade and destroy Iraq's air defence; (6) safeguard, if possible, the hostages detained in Iraq and Kuwait.

This strategic directive includes a clear task, the End State, the strategic bonds and objectives, and the reader will be able to detect the Centre of Gravity, a concept which will be taken up again in the next paragraph.

The End State, from which by definition the objectives derive, affects the three levels of the war.

In particular:
the strategic-level End State is



reached when the subordinate operational levels (if there are more than one) have achieved all the strategic goals assigned to them, or when the conflict can be considered finished and resolved. In Bosnia-Herzegovina the strategic-level End State is certainly the stabilization of the Balkan region. For this reason the Implementation Force (IFOR) which has attained its strategic goal, has become a Stabilization Force (SFOR). Moreover it must be said that the Balkans' stabilization is not pursued only through military activities but includes also a mix of economic and diplomatic efforts. In the Gulf War, instead, the strategic-level End State consisted in the ensured free access to the energy sources and the respect of international sovereignty. More recently, in July 1994, President Clinton defined the End State of the operation in Zaire as follows "to stop the cholera epidemic among Rwanda's refugees at Gona, in Zaire. But no action must be taken to restore Rwanda's government". In that

specific case, the End State permitted to conduct the operation with success and without losses, within thirty days.

- **at operational level the End State** is reached when the assigned strategic goal is attained. Examples of End State at operational level are: (1) the liberation of Kuwait and the restoration of the legitimate government in operation "Desert Storm"; (2) the creation of a favourable environment, where the U.N. and non-governmental agencies can assume full responsibility for the conduct of humanitarian support activities in the "Restore Hope" operation in Somalia; (3) the achievement within 12 months of the cessation of hostilities, withdrawal of the forces from the Separation Zone, and departure of the forces contributed by foreign Nations, in the "Joint Endeavour" operation in Bosnia-Herzegovina;
 - finally, some consider the **End State** also **at tactical level**, which corresponds to the achievement of the operational goal.
- Commanders at every level**

must know the End State and the conditions that determine success, before starting any operation. In peace-support operations, the End State does not consist in victory, but in the achievement of an agreement among the parties. Such operations in fact aim at establishing and keeping the conditions in which politico-diplomatic activities can proceed on the road of reconciliation, together with economic and humanitarian efforts. Consequently, when the End State is expressed in political terms, the employment of military force alone is not sufficient to obtain it.

The abstract connotation of the End State in peace-support operations not only makes its determination difficult, but can also require adjustments during the operation, especially in the so-called "mission creeping" (19). A hypothesis of End State for peace-enforcing operations could be as follows: *"diplomatic negotiations between the two opponents are productive; communication lines are safe; the forces in the field are beyond the Separation Zone; the ceasefire holds; U.N. troops have replaced the Force; humanitarian assistance operations are carried out without difficulty"*.

In any case the End State should describe a situation that is to be obtained, i.e. the result of the military force's intervention. It always finds its place in the **Commander's Intent** item of the OPLAN and/or OPORDER.

There is a close connection between strategic goals and intended End State. On the other hand, both express general concepts, such as not to bind the Commander as regards the procedures he employs to fulfill his mission. Some generic examples of strategic-level End State are shown in the Chart.

CENTRE OF GRAVITY

The Centre of Gravity is the

characteristic capability or location from where the enemy or the friendly forces derive their freedom of action, physical force or willingness to fight. The Centre of Gravity, when attacked and destroyed, leads to the enemy's defeat or to the pursuit of peace through negotiations.

The Centre of Gravity concept, which is a key element for determining the goals at the various strategic, operational and tactical levels, presents two main features. The first, offensive, tends to realize the mass against the enemy Centre of Gravity, while the second, of a defensive nature, tends to protect one's own. Moreover, the Centre of Gravity can be an abstract concept - especially at strategic level - such as the enemy's will and the structure and cohesion of the coalition, or a concrete element - especially at tactical level - such as the enemy's reserve, command and control structures and communication lines. In any case

the Centre of Gravity must not be mistaken with the enemy's weak points but, on the contrary, it concerns generally an aspect of his strong points.

Similar to what occurs with the End State, also the Centre of Gravity can be located respectively at strategic, operational and tactical level. For example: the capital of the enemy State, the willingness to fight, the consent of public opinion can be considered strategic-level Centres of Gravity. At operational level, in an operational theatre, the Centre of Gravity is instead related to the capability to concentrate the combat power (20) necessary to achieve the End State. Some hystorical examples can clarify the concept:

- in 1973 the Egyptian forces established a bridgehead beyond the Suez Canal with the 2nd and 3rd Army, getting ready for Israel's counterattack. Sadat, by assigning a strategic objective limited in space, aimed at going to the table of negotiations in a

Objectives/ Strategic Goals	End State (strategic level)
Reinstate the lawful democratic government in State Alpha invaded by Bravo	Forces of State Bravo driven out from State Alpha. Bravo's military forces unable to threaten Alpha. Peace and stability achieved in Alpha. Non-threatened free elections in Alpha.
Ensure free navigation in international waters between State White and State Green	Threat by submarines, warships, mines and piracy removed . Black naval forces unable to threaten free navigation
Protect the Brown minority threatened by military actions in State Violet.	Air and land threat by Violet removed . Survival of Brown minority assured .
Assure the integrity of State Red threatened by conflict between the Purple, Blue and Indigo minorities.	Paramilitary forces of the mainly Purple bordering State driven out from Red. Peace agreement among minorities signed Free elections guaranteed .

The Alpine volunteers, before their assignment to the various units, follow a specific training cycle at Aosta's Alpine Military School.

position of force and therefore the bridgehead on the eastern bank was defended with a large number of antitank systems and anti-aircraft missiles. This bridgehead, the Egyptian operational Centre of Gravity, was so well defended that the Israeli decided to conduct their counteroffensive applying the combat power on a weak point, as was the margin between the two Armies. The consequence was that the Centre of Gravity lost its cohesion, became vulnerable and the Israelis obtained such a success that only the superpowers' intervention managed to impose a ceasefire. It must be pointed out that the Centre of Gravity neither coincided with the boundary line between the two Armies, nor with the anti-aircraft defence system, nor with the communication lines. While the first of these three factors was vulnerable, the second was actually a strong point which, if attacked with aircraft, would have entailed considerable losses on the Israeli side;

- the Centre of Gravity can change during the campaign, as it was evident in the Falklands/Malvinas war. On October 6, 1982 the British had prepared a task force to free the islands conquered by Argentina four days before. This task force consisted of more than twenty ships, including two aircraft carriers. The amphibious component, a Brigade, was carried by a requisitioned commercial ship, the "Canberra". One can therefore assert that sinking one of the two aircraft carriers or the "Canberra" would have meant victory for Argentina. During the first phase of the operation the two aircraft carriers



were the Centre of Gravity at operational level because, without them, the British would have been unable to project their task force in the successive amphibious operation. The "Canberra", which profited from the protection provided by the aircraft carriers, was not vulnerable and therefore could not be defined as Centre of Gravity even if it carried the entire amphibious Brigade. In the second phase instead, the Centre of Gravity shifted to the Amphibious Brigade, because the air superiority alone would have been insufficient to win back the islands. Argentina could still have won had she been able to defeat the amphibious unit, but she did not have forces adequately trained to oppose that threat;

- Gen. Norman Schwarzkopf, in his book "It doesn't take a Hero" (21), in connection with the "Desert Storm" operation writes: ... *at strategic level we decided that Saddam Hussein was the keystone, but we could not act against him for ethical and legal reasons... thus Saddam was what the military theorists call the enemy **Centre of Gravity (strategic)**... For our purposes it was sufficient to "silence" Saddam, destroying his ability to exercise his command, based on an extremely centralized structure... and the Republican Guard, although not deployed in Kuwait, constituted the Iraqi strategic reserve for counteroffensive operations, and consequently was the Centre of Gravity at operational level... If we could realize the mass against*

the Republican Guard without having to fight against other forces, we could assuredly have achieved success...but if the Republican Guard abandoned the Theatre, surrendered or was defeated, we could have equally obtained it";

- in peace-support operations, such as the current ones in Bosnia-Herzegovina, the Centre of Gravity of the coalition and that of the opponents take on an abstract character, as becomes apparent in Fig.5. In particular, the term "enemy" is replaced by "opponents/warring factions" and the Centre of Gravity of the opponents must not be hit but safeguarded. In the "Restore Hope" operation in Somalia, the Centre of Gravity at operational level was instead aimed at controlling the routes and securing the freedom of movement of the population. This condition was in fact the necessary prerequisite for the distribution of humanitarian aid;
- the danger of escalation is the key factor in internal conflicts marked by the absence of the State's authority, as was the case in Somalia and in Bosnia. In these asymmetrical conflicts, military intervention in a climate of anarchy is justified more by the people's consent than by the U.N. mandate; a consent that may vanish in case of escalation of the conflict. Mistakes like the "Aidid hunt" in Somalia or the "bloody Sunday" in Northern Ireland in 1972 (22) have led to loss of consent, and therefore of legitimation, to the point that often the only way out is that of withdrawing the military mission (23).

From the historical examples just described, some considerations emerge;

- the Centre of Gravity is where the enemy has concentrated his combat power to attain his goals.

Direct attack is certainly the best choice, unless the Centre of Gravity is well defended, or if one has not sufficient forces or foresees to suffer excessive losses. In such cases, the best solution is to attack the vulnerabilities affecting the cohesion of the enemy Centre of Gravity;

- the Centre of Gravity is not permanent and can change according to the phases of the campaign, as it happened in the Falklands war;
- there is a close relation between the strategic-and operational-level Centres of Gravity, as in the case of "Desert Storm". In fact, the destruction of the Centre of Gravity at operational level (Republican Guard) can become decisive for the elimination of the Centre of Gravity at strategic level (Saddam Hussein's leadership);
- the combat power of the enemy can derive from his capability to manoeuvring and therefore must not be considered a static element, like a capital city or an industrial centre. Consequently also the Centre of Gravity can

change in time and space, in synchrony with the operation, as in the case of the Republican Guard in the Gulf War;

- the Centre of Gravity is not a component of the enemy combat power, as for example, the antiaircraft defence system in the Sinai, because its destruction alone does not lead to victory. In any case it is essential **not to** wear out one's own combat power attacking enemy vulnerabilities in order to gain and keep the initiative or to obtain a tactical success;
- every level of conflict has its own Centre of Gravity. At strategic level the people's or the government's will and the consent of public opinion are essential factors, as was proved by the Vietnam war;
- to correctly identify the Centre of Gravity, to attack it if it is vulnerable or if one has sufficient forces to do it, is a decisive factor of success, especially at operational level. If this is not possible, one should strike at the vulnerabilities that constitute the adversary's **Achilles' heel** in such a way as to neutralize his Centre of Gravity forcing it to implode,

CENTRE OF GRAVITY The case of Bosnia

Fig. 5

COALITION OPERATING ON UN MANDATE	CENTRE OF GRAVITY	OPPONENTS, WARRING FACTIONS
Political cohesion, unity in the coalition's purposes in support of the peace operation.	STRATEGIC LEVEL	The world watches how the Dayton agreements are honoured in order to end the conflict and contain violence.
Capability of conquering and maintaining the initiative over the opponents. Cohesion of the multinational force. Single chain of command.	OPERATIONAL LEVEL	Perception by the opponents that the peace agreement and its implementation are in their actual interest.

as it happened in operation "Desert Storm".

- it does not suffice to detect and hit the enemy Centre of Gravity, it is also necessary to safeguard and protect one's own;
- the Centre of Gravity in peace-support operations takes on an abstract character, in that it aims at obtaining the cooperation and consent of the warring parties, encouraging their ability to exercise command and control instead of destroying it. Moreover, the legitimization of the use of force obtained through a U.N. Resolution, the support of public opinion and the cohesion of the coalition form the friendly Centre of Gravity, an element that must be protected. If the legitimization fails, both diplomatic and military actions will also fail.

THE OPERATIONAL ART

The Operational Art consists of the coordinated management of all military activities. Through this, the strategic goals are transformed in tactical actions, in order to achieve the End State.

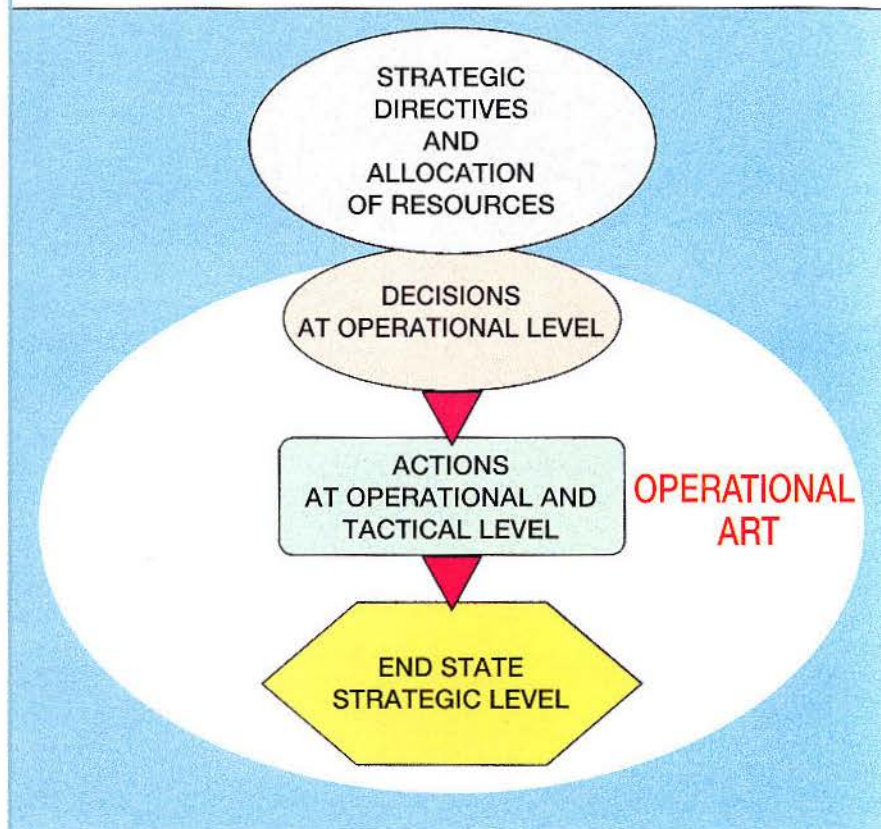
The Operational Art concept, a prerogative of the Soviet military doctrine up to 1980, has been adopted by the Western doctrine in the last twenty years.

The Operational Art is based first of all on strategic directives and on the allotment of the resources necessary to achieve the goals assigned. Such goals are translated into operational-level decisions (white area at Fig.6), decisions that in their turn produce actions at operational and tactical level, everything within the framework of the achievement of the strategic-level End State.

The application of the Operational Art requires not only an understanding of the conflict/war levels but also the concrete employment of the **concepts of operational design**, such as: Centre of Gravity, Decisive Points, Lines of Operation, Sequence, Phases, Operational

AREA OF ACTION OF THE OPERATIONAL ART

Fig. 6



Pause, Culminant Point, Contingency Planning. These instruments for planning will be examined more closely in the second part.

CONCLUSIONS

True as it is that the Armed Forces are a tool of foreign policy, it is equally true that they will be employed as a last resource. According to qualified commentators, the diplomatic management of a crisis uses up 97% of the time available while the remaining 3% is left to military intervention. The start of "parallel-planning" as soon as the crisis breaks out, the employment of assumptions, the detection of the strategic, operational and tactical levels and relevant goals, the implementation of the Campaign Planning and a clear definition of

the End State are the key elements that permit to carry through, in due time, the planning process for the employment of force.

(to be continued)



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NOTES

(1) As we shall see later, operational and tactical levels are not associated with specific command levels. The reader, therefore must not be misled by the association shown in the model.
 (2) Rehearse, (or Rehearsal or also Rock Drill) is a process through which the operational plan or the operation order are tested with Command Post or Field Exercises. This activity must always be conducted at tactical level (full rehearsal) while at operational level it is possible to test only the key aspects (partial rehearsal). During "Desert Storm" the 7th Corps, which was making the main effort, carried out a full rehearsal from the Assembly areas to the attack positions with the same deployment that was going to be applied in the subsequent offensive operation.
 (3) According to JP-102 (US) "assumption" is defined as a "conjecture deriving from the current situation, or a surmise on the future course of events, both accepted as truths in the absence of proofs to the contrary". They allow the Commander to proceed with his planning, evaluate the situation and make the appropriate decisions. The assumptions are nothing new, having been applied also to other fields, as medicine, economy, etc. An internist often makes assumptions, that he later confirms or discards according to

the results of clinical tests.

(4) The British doctrine has already implemented this concept. See "British Army Doctrine Publication Vol.1, Ed 1994, pages 2-3".

(5) For practical purposes, from now on we shall use the term "levels".

(6) A "campaign" is a series of correlated joint military operations, with the purpose of achieving strategic and/or operational objectives within time and space limits defined in advance. A "campaign plan" describes how these operations are conducted in time and space. The synchronization of air, land, naval and special operations into a multinational picture must be in keeping with diplomatic and economic efforts, in order to achieve the objectives of the coalition.

(7) "Major Operations" are a series of coordinated actions, limited to a single phase of a campaign. They are usually decisive for the development of the campaign.

(8) British Army Doctrine Publication, Vol.I, Ed. 1994 page 2-3;

(9) It generally coincides with the British Chief of the Defence Staff.

(10) "Joint Pub 3-0, Doctrine for Joint Operations".

(11) A "battle" consists of a succession of correlated engagements. It involves forces at Division or higher level, and can be fought in limited areas and times (for instance, on the Golan heights in 1973) or can last weeks and affect large areas.

(12) "Engagements" are limited conflicts or skirmishes, normally of short duration, fought at Division or lower level. They don't necessarily lead to battles.

(13) "The Levels of War (or Conflict), Operational Art and Campaign Planning, Strategic Combat Institute No 5 Ed. 1993".

(14) The definition of "Centre of Gravity" will be given in the following paragraphs.

(15) "The Levels of War (or Conflict), Operational Art and Campaign Planning, Strategic

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(17) "Battlefield Visualization Concept, TRADOC Pam 525-70 1997 (available on Internet).

(18) Norman Schwarzkopf: "It does not take a Hero "Bantam Press, 1992, page 468.

(19) The term "mission creeping" is used, in peace-support operations, when the mission is modified during the operation with the addition, for instance, of other tasks such as the management of elections, the search for persons wanted by the International Tribunal for war crimes, and their arrest. "Mission creeping", which must be considered a normal occurrence in future operations, can have fateful consequences, as was the case of UNPROFOR in Bosnia Herzegovina, where the Blue Helmets were placed in a "Peace Enforcing" condition without the personnel and means necessary to carry out the task.

(20) According to the U.S. publication "JCS Pub. 1-02: "Combat Power (DOD, NATO)", "Combat power" is the whole of the destructive force that a military formation or unit can apply against the enemy at a given moment. It is closely connected with the mass, which refers to the application of combat power at a place and time decisive for the achievement of success.

(21) Norman Schwarzkopf: "It does not take a Hero", Bantam Press, 1992, page 396.

(22) The employment of military force, which caused numerous losses among the catholic population of Northern Ireland, was recently reexamined by Tony Blair's government in a speech at the House of Commons on January 29, 1998. Many commentators believe that the escalation of the conflict up to these days was originated by that fact.

(23) Cristopher Lord: "Intermediate Deployments, Strategic Combat Institute", Cambridge, 1996, page 18.



RIVISTA MILITARE

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In a spirit of continuity with the round table held in Rome last year, on November 19th, at the Central Military Library of "Palazzo Esercito", "Rivista Militare" has promoted three more study meetings, with the intent of activating a circuit of internal communication, favouring interdisciplinary studies, stimulating and encouraging an intense intellectual tension and a fruitful discussion of ideas.

Civitavecchia January/28/98

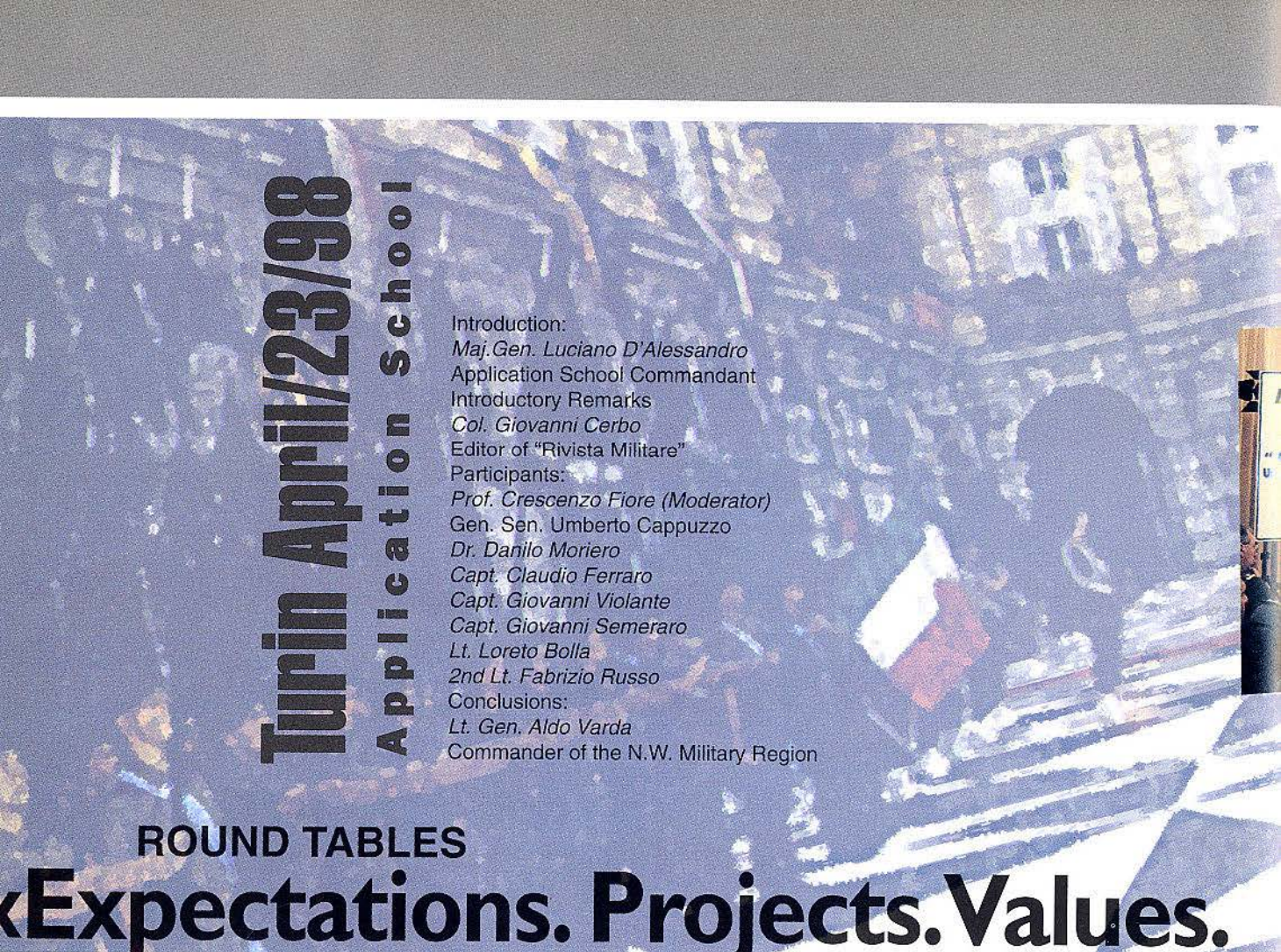
ROUND TABLES

«The Military today: motivation, training, communication».

The study meeting, held in the presence of Lt. Gen. Francesco Cervoni, Chief of Staff of the Army, witnessed the participation of the students of the 124th Staff Course and of the representatives of the formative, academic, operational, logistic and territorial areas of the Service. It was an extraordinary opportunity to testify the Army's commitment to invest the most brilliant intellectual energies in a lively and constructive confrontation of opinions, with no censorship or reservations.

Introduction:
Lt. Gen. Roberto Altina
Schools Inspector
Introductory Remarks
Col. Giovanni Cerbo
Editor of "Rivista Militare"
Participants:
Prof. Vincenzo Fiore (Moderator)
Gen. Sen. Umberto Cappuzzo
Prof. Flavio Russo
Dr. Danilo Moriero
Capt. Pasquale Sotgia
Capt. Luigi Piantadosi
Capt. Giovanni Semeraro
W.O. Agostino Ranucci
1st Cpl. Giovanni Del Regno
Pvt. Marco De Querquis
Conclusions:
Lt. Gen. Francesco Cervoni
Army Chief of Staff





Turin April/23/98

Application School

Introduction:

Maj. Gen. Luciano D'Alessandro

Application School Commandant

Introductory Remarks

Col. Giovanni Cerbo

Editor of "Rivista Militare"

Participants:

Prof. Crescenzo Fiore (Moderator)

Gen. Sen. Umberto Cappuzzo

Dr. Danilo Moriero

Capt. Claudio Ferraro

Capt. Giovanni Violante

Capt. Giovanni Semeraro

Lt. Loreto Bolla

2nd Lt. Fabrizio Russo

Conclusions:

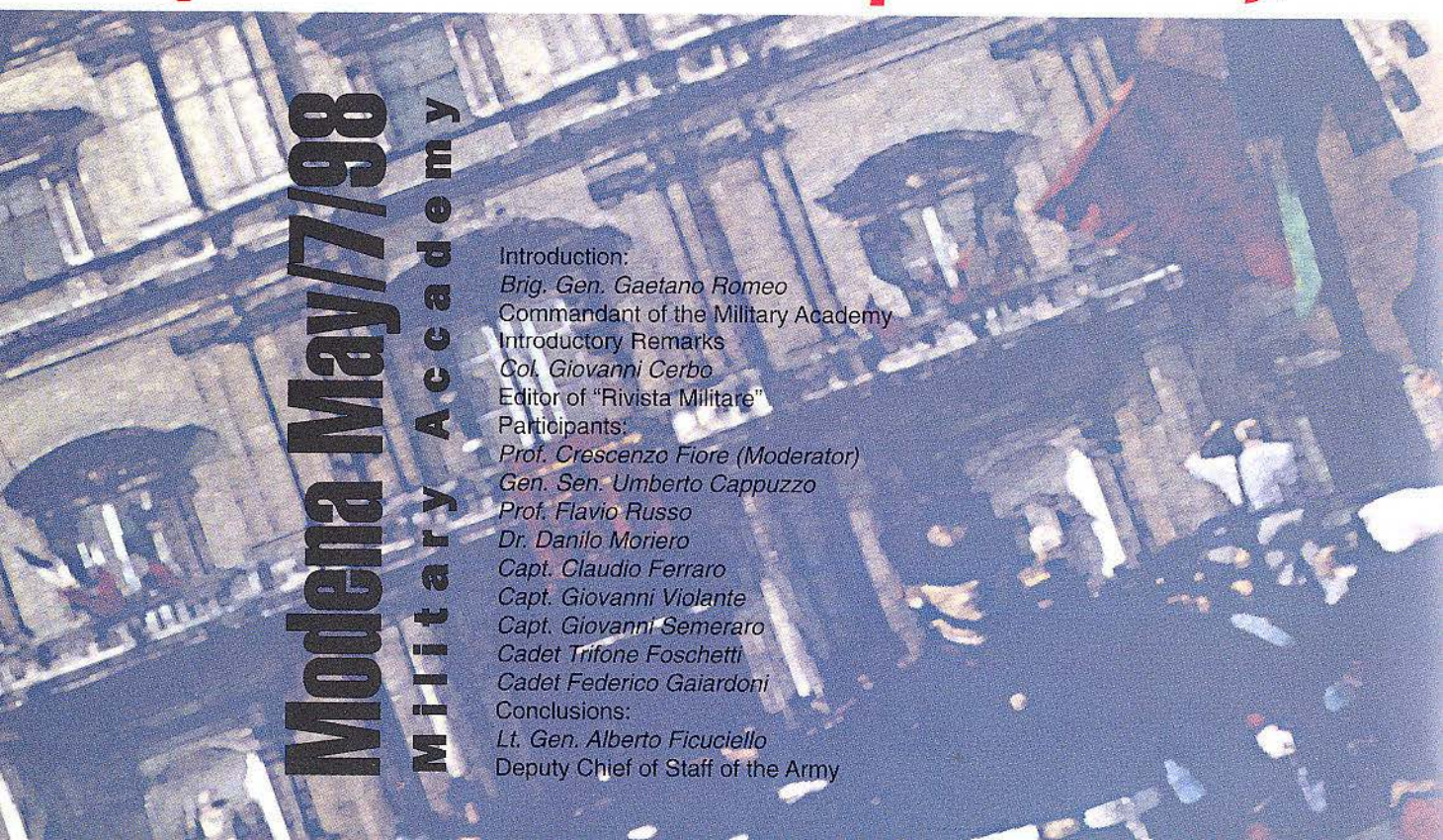
Lt. Gen. Aldo Varda

Commander of the N.W. Military Region

ROUND TABLES

Expectations. Projects. Values.

Reflections on Professional, Cul



Modena May/7/98

Military Academy

Introduction:

Brig. Gen. Gaetano Romeo

Commandant of the Military Academy

Introductory Remarks

Col. Giovanni Cerbo

Editor of "Rivista Militare"

Participants:

Prof. Crescenzo Fiore (Moderator)

Gen. Sen. Umberto Cappuzzo

Prof. Flavio Russo

Dr. Danilo Moriero

Capt. Claudio Ferraro

Capt. Giovanni Violante

Capt. Giovanni Semeraro

Cadet Trifone Foschetti

Cadet Federico Gaiardoni

Conclusions:

Lt. Gen. Alberto Ficuciello

Deputy Chief of Staff of the Army

project communication

The Round Tables were attended by the Student Officers of the Application School and the Cadets of the Military Academy, who participated as auditors.

The issue discussed at both meetings concerned the concept of "expectation", a problem syllogistically related to those discussed on previous

occasions: motivational drive, formative appeal, requirements of communication as a function of

the individual role, are in fact linked to the legitimate need of life projects within a system of shared values, as well as to the anxieties, the expectations and life prospects of the young students and cadets.

The two meetings - aimed at developing, especially in the younger Cadres, a more spontaneous and aware participation in the needs of the organization, encouraging a stronger

t ural and Social Prospects».

professional vitality - witnessed the very interested participation of all, speakers and audience, in a lively and dialectic confrontation of ideas.

With these initiatives, which were not meant to be an arena for academic statements of principles and sterile logomachies, we wished to cause little electric shocks, launch disruptive mad splinters, light the fire for study and knowledge, develop mechanisms of implosion and explosion of thoughts, ideas and passions, as well as to prime a cultural "fall-out",

capable of capturing the mind and the heart of the young, who are the dawn of our Institution. Let us hope we have succeeded.



Write

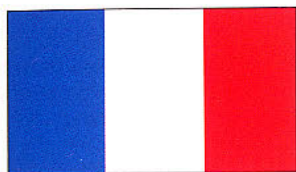
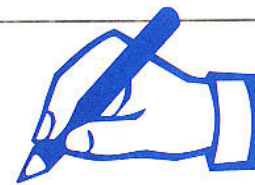
for Rivista Militare



*The debate is open to
everyone in the spirit of
information pluralism
and a constructive
argumentation
which has
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characterized
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*The unpublished works, free from publishing
ties and complete with a brief synthesis,
must not exceed 12 typewritten pages*

SOMMAIRE INHALT RESUMEN



Le développement et le début de nouveaux conflits, par Maurizio Coccia (p. 50).

Cette fin de siècle est caractérisée par la vitesse du changement à cause d'une politique économique avec des signes particuliers de façon globales. Un processus qu'a déclenché la crise par laquelle les Pays plus faibles sont en train de passer, incapables de gérer et accroître leurs propres ressources, en les exposant au grave péril de luttes intestines et extérieures. À ce propos il est intéressant de souligner la thèse de la «double injustice», pour citer l'Auteur, qui est la cause principale de toutes les guerres. Elle naît de la considération qu'il y a une élite réduite que possède trop de ressources qu'on utilise pour défendre les grands privilégiés.

La Belgique. La nouvelle Armée de Terre. Interview au Général Roger Maes, par les soins de Enrico Magnani (p. 58).

Il y a quelques années que l'Armée de Terre belge a commencé une restructuration radicale que la mènera à revêtir une forme agile et complètement professionnalisée. La «Force Terrestre» s'articulera en: 1 Division mécanisée (sur 3 Brigades mécanisées et des Divisions de combat et de support); 1 Brigade de parachutistes; 1 Groupe d'aviation; 1 Division de support au combat; 1 Division de support logistique. La progressive rénovation a malheureusement subi des ralentissements à cause des exigences de bilan. On espère de le terminer dans quelques années.

Le Canada. La nouvelle Armée de Terre. Interview au Lieutenant-Général Bill Leach, par les soins de Enrico Magnani (p. 42).

Il y a à peu près trente ans que le

Canada a réuni les trois Armées traditionnelles dans une seule Force Armée intégrée. En présence de fortes réductions de bilan, l'Armée de Terre a récemment subi de significatives transformations qui ont comporté: la fermeture de nombreuses bases militaires en Europe; la réduction de la présence militaire du Canada à l'intérieur de l'OTAN; l'augmentation de la puissance, en sens interforces des capacités de combat des forces aux armes et de celles en réserve. Les résultats - selon le Général de Division Bill Leach - ont été très allechants, et en effet les dernières missions des unités canadiennes en Afrique et en ex Yougoslavie témoignent tout ça.

Armée de Terre. «Projet 2000». Les paquets de capacité. La fonction «Combat», par Domenico Villani et Sabato Errico (p. 6).

La division des Forces de l'instrument militaire de terre (Forces de Projection, de Réaction et de Présence et Surveillance) nécessite la définition des modules élémentaires appelés à exercer une activité opérationnelle particulière. Parmi les fonctions opérationnelles qu'on a découvertes il y a le «Combat» qui impose la disponibilité de modules monofonction à niveau de Régiment ayant des potentialités comme la projectabilité, la protection, la mobilité et la puissance de feu. Les Régiments d'Infanterie et de Cavalerie destinés à la fonction «Combat», pour leur nombre, leur typologie, leur division, leurs moyens, leur armement, leur équipement et pour leur instruction, sont structurés convenablement à la mission opérationnelle confiée.

Armée de Terre. «Projet 2000». L'Artillerie antiaérienne.

Développement et perspectives, par Sauro Baistocchi (p. 20).

Dans les «Peace Support Operations» les rapports de forces parmi les contractants sont souvent caractérisés par des asymétries accentuées. L'attaque de l'agresseur ne sera jamais de type maximum mais plutôt sélectif (un seul coup) et adressé aux objectifs névralgiques. La tâche de l'Artillerie antiaérienne est celle de disputer le passage aux avions des ennemis à

travers des principes d'agrégation pour des modules de systèmes d'arme différenciés et complémentaires («cluster»).

Armée de Terre. «Projet 2000». La fonction «Combat Support». Le Génie, par Ivan Felice Resce et Mario Ruggiero (p. 6).

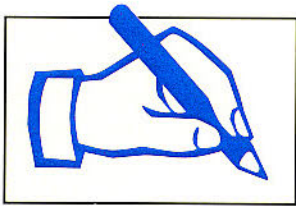
Ce travail illustre les typiques activités du Génie, en en soulignent les éléments de nouveauté dans les secteurs de la mobilité, de la contre-mobilité, de la protection, du support général et du déminage du territoire. Il décrit aussi le rôle joué du Génie dans les «Paquets de capacité», en mettent en évidence l'exigence de la continue adaptation de systèmes, de procédés d'emploi et de structures ordonnatrices.

Armée de Terre. «Projet 2000». L'Artillerie de Terre. Développement et perspectives, par Rocco Panunzi et Gualtiero De Cicco (p. 16).

Cet article trace le tableau de la future organisation de l'Artillerie de Terre au niveau du Commandement FOTER et de Brigade (avec son Centre Opérationnel pour le Support du Feu comme possible élément du Poste Commandement Avancé du Commandement Opérationnel Intermédiaire) et représente les possibles développements du système. L'Auteur examine aussi les tâches de l'Artillerie, en l'attribuent un rôle central pour le support du feu aux Forces de Terre, directement comme une composante «combat support» ou indirectement comme une composante «combat» dans le développement d'opérations en profondeur.

Vers la nouvelle Armée de Terre. Faisons le point, par Amilcare Casalotto et Nicola Gelao (p. 30).

Le passage de l'idée de «défense collective» à celle de «sûreté collective» a exalté les fonctions des Forces Armées surtout pour ce qui concerne leur rôle de soutien de la politique internationale. Notre instrument militaire, dans toutes ses divisions (opérationnelle, scolaire, de l'instruction, logistique et du



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territoire), est en train de se conformer rapidement aux nouvelles exigences à travers une profonde réorganisation de sa structure. Cette oeuvre n'est pas encore terminée, mais elle est avancée. C'est-à-dire qu'on est en train de traduire en actes une Armée de Terre qui est à même de faire face aux défis du futur.

La planification opérationnelle dans les milieux multinationaux, par Pier Paolo Lunelli (p. 70).

Ce travail décrit les principaux fondements doctrinaux sur lesquels les contingents multinationaux se basent par mener à bon port et en temps utile le processus de planification pour l'emploi de la Force. En particulier, l'Auteur examine:

- les modalités de départ du «parallel-planning», opération qui permet, aux nombreux niveaux de commandement de partager le temps à disposition pour la planification sur la base des «faits» et des «assumptions» (hypothèses et prémisses);
- les niveaux du conflit (stratégique, opérationnel et tactique) avec les objectifs mis en corrélation à eux;
- l'«End State» et son lien avec les objectifs stratégiques et tactiques;
- le centre de gravité duquel l'ennemi et les forces amies tirent leur liberté d'action et leur volonté de combattre.



Entwicklung und Konflikte, von Maurizio Coccia (s. 50).

Die Jahrtausendwende ist durch raschen Wandel unter dem Druck einer Wirtschaftspolitik deutlich globalen Charakters gekennzeichnet - ein Prozeß, der vor allem schwächere Länder bedroht, die nicht in der Lage sind, die eigenen Ressourcen zu

verwalten und zu vermehren, und der sie damit dem Risiko innerer und äußerer Konflikte aussetzt. Interessant ist in diesem Zusammenhang die These der «doppelten Ungerechtigkeit», wie der Autor sie nennt, die sowohl Ursache als auch oft Auslöser bewaffneter Konflikte sei. Die These basiert auf der Überlegung, daß eine immer kleinere Elite über zu viele Ressourcen verfügt, die eingesetzt werden, um große Privilegien zu verteidigen.

Belgien. Die neuen Streitkräfte, Interview mit General Roger Maes, von Enrico Magnani (s. 58).

Die belgische Armee hat seit einigen Jahren den Weg einer radikalen Umstrukturierung eingeschlagen, die sie dazu führen wird, in kurzer Zeit eine schlanke und ausschließlich aus Berufssoldaten bestehende Armee zu sein. Die Force Terrestre wird sich wie folgt aufteilen: eine motorisierte Division (mit drei motorisierten Brigaden und Kampf- und Unterstützungseinheiten); eine Fallschirmspringerbrigade; eine Luftwaffengruppe; eine Kampfunterstützungsdivision; eine Division logistischer Unterstützung. Der Erneuerungsprozeß ist leider durch Haushaltserwägungen verlangsamt worden. Es besteht jedoch die Hoffnung, ihn innerhalb der nächsten fünf Jahre zu vollenden.

Kanada. Die Neue Armee. Interview mit Generalleutnant Bill Leach, von Enrico Magnani (s. 42).

Seit etwa dreißig Jahren hat Kanada die drei traditionellen Gattungen in einer integrierten Streitkraft vereinigt. Angesichts starker Haushaltskürzungen haben die Bodestreitkräfte jüngst signifikante Umwandlungen erfahren: die Schließung zahlreicher Basen in Europa; die Verringerung der kanadischen Militärpräsenz in der NATO; den integrierten Ausbau der Kampffähigkeit der Reservekräfte und derjenigen unter Waffen. Die Ergebnisse sind - nach Meinung von Leach - sehr vorteilhaft, wie die jüngsten Missionen kanadischer Einheiten in Afrika und im ehemaligen

Jugoslawien zeigen.

Heer «Projekt 2000», Kapazitätspakete. Die Combat-Funktion, von Domenico Villani und Sabato Errico (s. 6).

Die Unterteilung der Bodestreitkräfte (Schutz-, Eingreif-, Präsenz- und Überwachungskräfte) macht eine Festlegung der Grundeinheiten nötig, welche die Aufgabe haben, eine bestimmte operative Tätigkeit auszuführen. Zu den ausgemachten operativen Funktionen gehört die sogenannte Combat-Funktion, welche die Verfügbarkeit von monofunktionalen Einheiten auf Regimentsebene vorschreibt, die durch die Fähigkeit zur Einsatzplanung, Schutz, Mobilität und Feuerkraft ausgezeichnet ist. Die Infanterie- und Kavallerieregimente, die der Combat-Funktion zugeteilt sind, sind nach Zahl, Typ, Gliederung, Fahrzeugen, Bewaffnung, Bemannung und Ausbildung auf eine der ihnen zugewiesenen operativen Mission angemessene Art strukturiert.

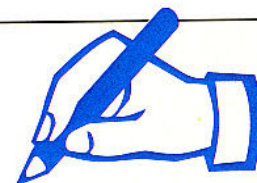
Heer «Projekt 2000», die Flugabwehr-Artillerie. Entwicklung und Perspektiven, von Sauro Baistrocchi (s. 20).

In den PSo sind die Kräfteverhältnisse der Gegner oft durch starke Asymmetrien gekennzeichnet. Die Offensive des Angreifenden wird niemals massiv, sondern selektiv (mit Einzelschlägen) und gegen neuralgische Ziele gerichtet sein. Aufgabe der Flugabwehr-Artillerie ist es, die feindlichen Trägersysteme nach Kriterien der modularen Ansammlung von differenzierten und komplementären Waffensystemen (clusters) zu bekämpfen.

Heer «Projekt 2000». Die Funktion «Combat Support» (Kampfunterstützung). Das Pionierkorps, von Ivan Felice Resce und Mario Ruggiero (s. 6).

Die Arbeit erläutert die typischen Pioniertätigkeiten und hebt die innovativen Elemente in den Bereichen der Mobilität, der Gegenmobilität, dem Schutz, der allgemeinen Kampfunterstützung und

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der Minenräumung hervor. Darauf beschreibt die Studie die Rolle, die das Pionierkorps in einer Summe von Fähigkeiten («Pacchetti di capacità») spielt und hebt die Notwendigkeit von dauernder Anpassung von Systemen, Anwendungsprozeduren und Ordnungsstrukturen hervor.

Heer «Projekt 2000». Die Bodenartillerie. Entwicklung und Perspektiven, von Rocco Panunzi und Gualtiero De Ciccio (s. 16).

Die Arbeit entwickelt die zukünftige Organisation der Bodenartillerie auf der Kommandoebene der operativen Bodenstreitkräfte und auf Brigadeebene (mit operativem Zentrum zur Feuerunterstützung als möglicher Einheit des vorgeschobenen Beobachters des mittleren operativen Kommandos) und gibt einen Ausblick auf die möglichen Entwicklungen des Systems. Schließlich werden die Aufgaben der Waffengattung untersucht, und es wird ihr eine zentrale Rolle bei der Feuerunterstützung der Landstreitkräfte zugewiesen, direkt als «combat support» (Kampfunterstützungs-) Komponente oder indirekt als echte Kampfkomponekte bei der Entwicklung von Operationen in der Tiefe des Raums.

Auf dem Wege zu einer Neuen Armee. Ein Zwischenbericht, von Amilcare Casalotto und Nicola Gelao (s. 30).

Der Übergang vom Konzept der «kollektiven Verteidigung» zu demjenigen der «kollektiven Sicherheit» hat die Funktion der Streitkräfte vor allem, was ihre Unterstützungsfunktion zur internationalen Politik betrifft, hervorgehoben. Unsere Institution ist dabei, sich in allen ihren Bereichen (im operativen, im schulischen, im militärisch ausbildungsmäßigen, im logistischen wie im territorialen) schnell an die neuen Bedürfnisse anzupassen, indem sie eine tiefgreifende strukturelle Neuorganisation durchlebt. Das Werk ist noch nicht vollendet, doch sind wir schon ein gutes Stück voran bei der Schaffung einer Armee, die in der Lage ist, den Herausforderungen der Zukunft

zu begegnen.

Operative Planung bei Multinationalen Einsätzen, von Pier Paolo Lunelli (s. 70).

Die Arbeit beschreibt die wichtigsten schulmäßigen Eckpfeiler, auf die sich multinationale Kontingente beziehen, um den Planungsprozeß für den militärischen Einsatz in einem knappen Zeitrahmen erfolgreich abzuschließen. Insbesondere werden folgende Aspekte untersucht:

- die Anlaufphase des parallel-planning, eines Verfahrens, das es erlaubt, auf den verschiedenen Befehlsebenen die für die Planung verfügbare Zeit aufgrund der facts und der assumptions (Voraussetzungen und Annahmen) einzuteilen;
- die Konfliktebenen (strategisch, operativ und taktisch) mit den jeweils damit verbundenen Zielen;
- der Endzustand (End State) und sein Zusammenhang mit den strategischen und taktischen Zielen;
- das Gravitationszentrum, aus dem der Feind und die befreundeten Kräfte ihre Handlungsfreiheit und ihren Kampfeswillen ziehen.



Desarrollo y conflictualidad, de Maurizio Coccia (p. 50).

Este fin de siglo está caracterizado por la velocidad de la mutación bajo el empuje de una política económica de las filitaciones marcadamente globales. Un proceso que pone en crisis los Países más débiles, incapaces de gestionar y incrementar sus recursos, exponiéndolos al grave riesgo de conflictos internos y externos. Adrede es importante la tesis de la «doble injusticia», como la define el Autor, causa desencadenante de todas las guerras. Esa nace de la consideración que una reducida «élite» tiene muchos recursos que vienen utilizados para defender los grandes privilegios.

Belgica. El nuevo Ejército. Entrevista al General Roger Maes, de Enrico Magnani (p. 58).

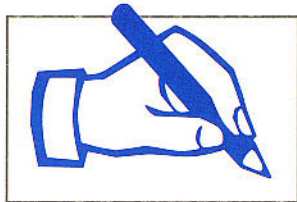
El Ejército belga ha emprendido desde algunos años la carretera de una radical restructuración que lo llevará a absumir, en breve tiempo, una fisionomía delgada y plenamente profesionalizada. La «Fuerza Terrestre» se articulará en: 1 División mecanizada (en 3 Brigadas mecanizadas y Unidades divisionales de combate y soporte); 1 Brigada de paracaidistas; 1 Agrupamiento aviación; 1 División de soporte al combate; 1 División de soporte logístico. La progresiva renovación desgraciadamente ha sufrido algunas disminuciones para exigencias de balance. Se espera de llevarlo al fin en los próximos cinco años.

Canada. El nuevo Ejército. Entrevista al General Bill Leach, de Enrico Magnani (p. 42).

Más o menos desde han 30 años el Canadá ha reunido las tres Armas tradicionales en una Fuerza Armada integrada. En presencia de fuertes reducciones de balance, la Fuerza Terrestre ha sufrido recientemente significativas transformaciones que han implicado: el cierre de muchas bases en Europa; la reducción de la presencia militar canadiense en la OTAN; al potenciamiento de las capacidades de combate de las fuerzas a las armas y de las de reserva. Los resultados - para el entrevistado - han sido muy halagüeños, como testimonian las últimas misiones desarrolladas de las Secciones canadienses en Africa y en la ex Yugoslavia.

Ejército «Proyecto 2000». Paquetes de capacidad. La función «Combat», de Domenico Villani y Sabato Errico (p. 6).

El articulación de las Fuerzas del instrumento militar terrestre (Fuerzas de Proyección, de Reacción, de Presencia y de Vigilancia) pide la definición de los modelos elementales llamados para desenrollar una específica actividad operativa. Entre las funciones operativas individuadas hay la «Combat» que impone la disponibilidad de modelos monofunción a nivel Regimiento con



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potencialidades caracterizadas por proyectabilidad, protección, movilidad y potencia de fuego. Los Regimientos de Infantería y de Caballería destinados a la función «Combat», por número, tipo, articulación, medios, armamento, equipaje y adiestramiento, se han estructurado oportunamente para la misión operativa asignada.

Ejército «Proyecto 2000». La Artillería contraaereos. Desarrollo y perspectivas, de Sauro Baistocchi (p. 20).

En las «Peace Support Operations» las relaciones de Fuerzas entre los contraentes muchas veces están caracterizadas de acentuadas asimetrías. El ataque del agresor nuncie será máximo sino selectivo (golpe singular) y hacia objetivos nevralgicos. Compito de la Artillería contraaereos es lo de contrastar los vectores enemigos gracias criterios de agregación por módulos de sistemas de arma diferenciados y complementares («cluster»).

Ejército «Proyecto 2000». La función «Combat support». El Genio, de Ivan Felice Resce y Mario Ruggiero (p. 6).

El trabajo ilustra las actividades típicas del Genio, subrayando los elementos de novedad en los sectores de la movilidad, de la contramovilidad, de la protección, del soporte general y de la bonificación del territorio de los mecanismos explosivos. Pues, ilustra el rol desarrollado del Genio en los «Paquetes de capacidad», poniendo en evidencia la exigencia del continuo adecuamiento de sistemas, procedimientos de empleo y estructuras ordinativas.

Ejército «Proyecto 2000». La Artillería terrestre. Desarrollo y perspectivas, de Rocco Panunzi y Gualtiero De Cicco (p. 16).

El trabajo traza el futuro orden de la Artillería terrestre a nivel Mando FOTER y Brigada (con Centro Operativo para el Soporte de Fuego como posible célula del Puesto Mando Avanzado del Mando Operativo Entremedio) y expone los posibles desarrollos del sistema. Por

fin, examina los encargos del Arma, asignándole un rol central para el soporte de fuego a las fuerzas terrestres, directamente como componente «combat support» o indirectamente como verdadera componente «combat» en el desarrollo de operaciones en profundidad.

Hacia el nuevo Ejército. Punto de situación, de Amilcare Casalotto y Nicola Gelao (p. 30).

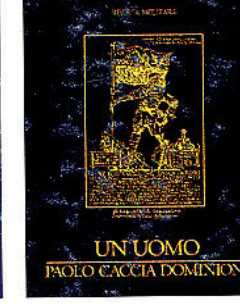
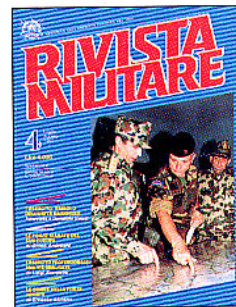
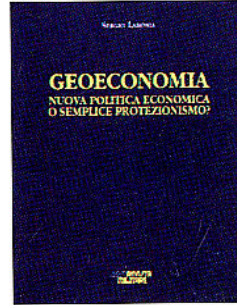
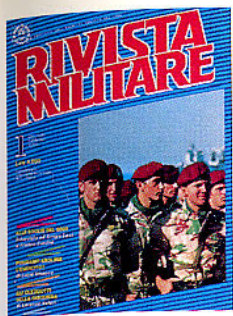
El pasaje desde el concepto de «defensa colectiva» hasta lo de «seguridad colectiva» ha exaltado las funciones de las Fuerzas Armadas sobretudo para lo que atañe su rol de sostén a la política internacional. Nuestro instrumento militar en todas sus articulaciones (operativa, escolar, adiestrativa, logística y territorial) se está adecuando rápidamente a las nuevas exigencias gracias a una profunda reorganización estructural. La obra aún no se ha terminado, pero estamos adelantos para poner en ser un Ejército capaz de afrontar los desafíos del futuro.

La planificación operativa en contextos multinacionales, de Pier Paolo Lunelli (p. 70).

El trabajo describe las principales ideas doctrinales en las que se fundan los contingentes multinacionales par conducir a buen fin y en tiempo necesario el proceso de planificación para el empleo de la fuerza. En particular son examinados:

- las modalidades de inicio del «parallel-planning», operación que permite a varios niveles de comando de repartir el tiempo necesario para la planificación en función de los «factos» y de las «assumptions» (hipótesis y presupuestos);
- los niveles de conflicto (estratégico, operativo y táctico) con los objetivos correlados;
- el «End State» y su vínculo con los objetivos estratégicos y tácticos;
- el centro de gravedad desde que el enemigo y las fuerzas amigas toman su libertad de acción y la voluntad de combatir.

THE MANAGERIAL STYLE OF RIVISTA MILITARE



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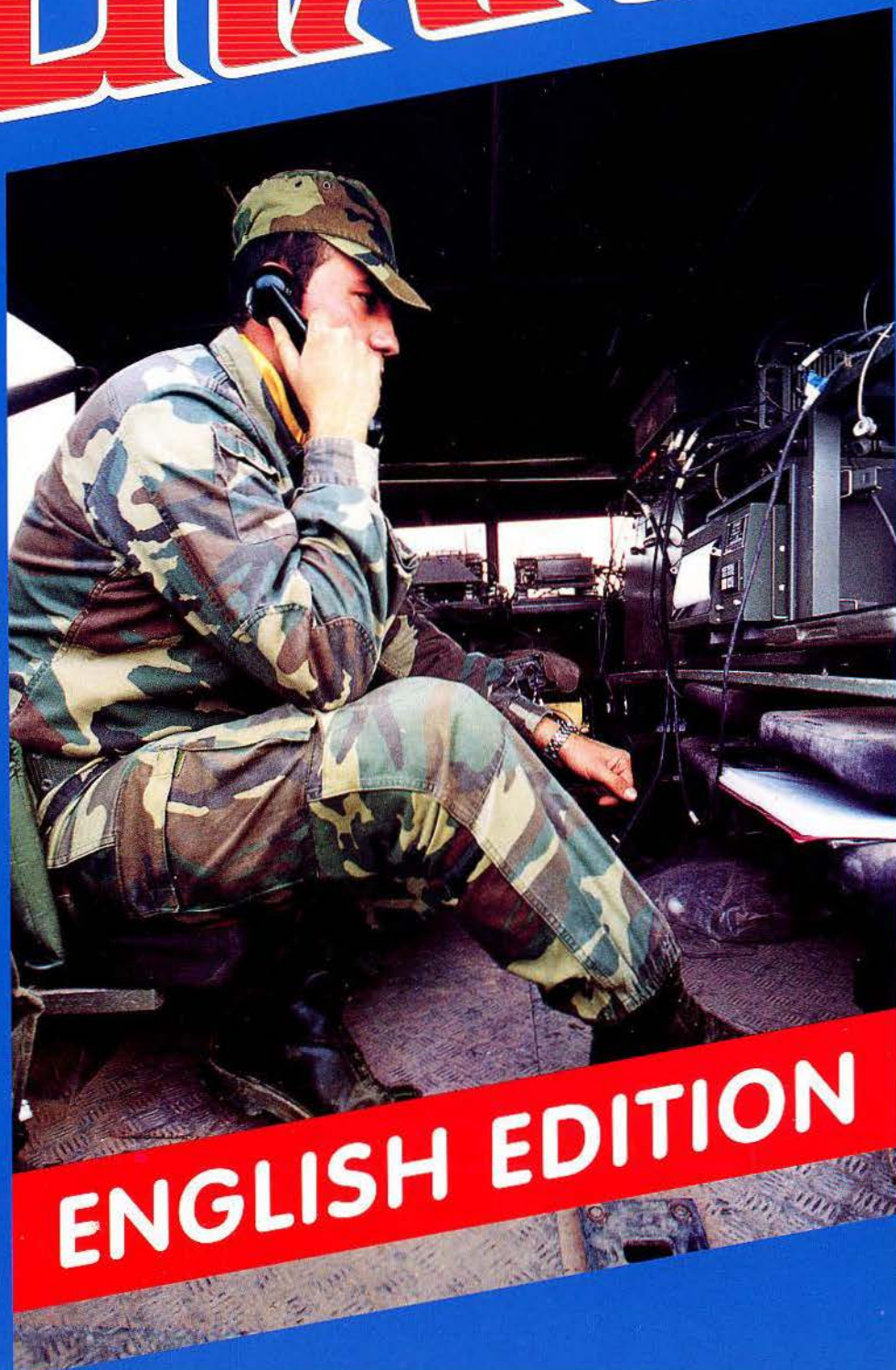
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THE NEW NATO

**INTERVIEWS WITH
THE CHIEF OF STAFF OF
THE NORWEGIAN ARMY
AND
THE CHIEF OF THE
DANISH DEFENCE STAFF**

**ARMY
«PROJECT 2000»**



ENGLISH EDITION



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The prospects of a further enlargement is for NATO a declared objective about which, on principle, there are no more doubts.

For Poland, the Czech Republic and Hungary this a process already started, which will not fail to weight on the political balances of the Continent, on the transatlantic relations and even on the future of the Countries candidate for partnership.



THE NEW

NATO



by Vittorio Barbati*



The NATO summit of July 8, 1997 decided to enlarge the Alliance, starting from 1999, with the inclusion of three countries, former members (or parts of former members) of the defunct Warsaw Pact - Poland, the Czech Republic and Hungary - while the other candidates are still on the waiting list. The protocols of adhesion were signed on December 16 of the same year, and will come into force after the ratification by the Nations concerned.

This decision, adopted after a debate that witnessed some of the allies - particularly France and Italy - sponsor a greater widening, extended, to start with, to Rumania and Slovenia, raises a series of

very pressing problems, which affect various fields and demand an in-depth reconsideration of the very function of the Atlantic Alliance.

It must be stated at once that NATO today is no more in a position to pursue clear aims and lives waiting for a precise definition of its tasks. Certainly it has secured peace and development for decades to its members and, in a broader sense, directly or indirectly, to the entire Western world (meant in a politico-economic, and not merely geographic, sense). Moreover, it has created a multinational structure of planning and command which has reached, through a lengthy and difficult process of refinement, an almost peerless level of efficiency. Therefore it would be a crime to dissolve it; it should be given instead new directions and goals.

The first definition of the new objectives to be assigned to NATO will be of course a political task.

It will be the politicians' job to decide whether NATO should be transformed from a defensive Alliance, with the main task of safeguarding the liberty and integrity of its members, into an intervention body of the international community, chiefly charged with keeping or enforcing peace in critical areas, employing force when and where necessary, either actively (i.e. even with war) or with a deterrent function. Admittedly, more in fact than in law and with the UN's forced endorsement, NATO has already performed

and is currently performing a similar function in Bosnia. But this is occurring without any change in the charter of the Alliance.

And it will again be a political task to determine - with the indispensable technical support, given the enormous complexity of the technical problems connected with this choice - what NATO's scope will be and which relations will have to be established, or strengthened, with friendly countries or other local or regional alliances that may be formed in other areas.

The redefinition of NATO's scope and tasks requires a specification of the «external» relations of the Alliance, first of

will be authorized to act on behalf of the United Nations.

In connection with this picture, the relations to be established with the two major «Eastern» powers, Russia and China, appear to be particularly delicate. They are nuclear powers and permanent members of the UN Security Council, and it must be born in mind that the former does not appreciate the extension of NATO to the East, while the latter does not seem keen on establishing close relations of politico-military cooperation with the West, while both aim at reinforcing their economic ties, especially the bilateral ones, with the Western countries. All



all with the UN and particularly with its most important body, the Security Council, in order to translate tasks and scope into juridical forms and actual agreements. If NATO will have to operate - outside its institutional «defensive» purposes - as the armed hand of the international community, it will be necessary to decide which margins of manoeuvre will have to be permanently at its disposal and through what legal instruments it

this without overlooking the role that might, or must, be played by the other actors - big, medium or small - on the international scene, starting from Japan and the countries - India, Pakistan, etc. - which, in one way or the other, seem destined to influence the main political, economic and strategic balances.

We ought to specify some fundamental points. Here, more than a simple enlargement,

what is envisaged is a real «refoundation» of the Atlantic Alliance. As a matter of fact, without a radical change in its objectives and operational structure, both the already decided expansion and a subsequent, probable, enlargement would be of rather scarce significance, at least within a new world order, still to be built from scratch.

Nevertheless, this «refoundation» cannot be carried out from one



Above.
The USS «John C. Stennis» (CVN74) is the seventh aircraft-carrier of the «Nimitz» class.

Facing page.

A TRM 700-100 tank-carrier engaged in the transport of a «Leclerc» tank of the French Army.

day to the next. It will have to be the result of a labourious and difficult middle/long-term process, during which the politico-diplomatic action will have to go side-by-side with a very accurate scientific analysis of the prospects for the future, with particular reference to the political, economic and military factors that could affect the international force ratios.

In short, here are the factors that will have to be kept into account in order to rationally plan and realize the development of the Atlantic Alliance.

First of all, one will have to assess - with middle/long-term prospects, as we mentioned before - what the real military weight of the big, medium or small actors on the international scene is or could be, in order to foresee the possible factors of destabilization, and the contribution that the various countries could give to keep international peace and stability. Clearly this means entering into a real minefield, because even the most accurate hypotheses (it would be risky to make any forecast) can be disproved by facts. But it is equally evident - at least in the author's opinion - that this assessment cannot be avoided. The parameters to be considered with extreme accuracy and caution, for each country and geographical area could be the following:

- political regimes and their possible or probable prospects of evolution;

- actual or potential availability of raw materials and energy sources;
- geo-strategic location of the various countries, also in relation to the various possible areas of tension;
- situation and prospects as regards pure and applied research;
- short, medium and long-term military programmes, aimed at developing mass-destruction arms and relevant carriers (ballistic missiles first of all);
- prospects of evolution of the conventional military assets, especially of what may concern, on the one side, the capability of influencing the «local» balances and, on the other, the possibility to acquire projection power of a more-or-less wide range;
- actual or potential capabilities of their industrial assets;
- availability of financial resources;
- levels of energy and food self-sufficiency.

These are - admittedly again in the author's opinion - the main «external» factors that must be kept in mind when planning and implementing a progressive enlargement of NATO. But this enlargement brings up also another problem, which remained «frozen» for many years: that of the balance, within the Alliance, between the American superpower and the European members. It is a hot question which presents several political, legal, economic-financial, scientific-technological and military aspects, the solution of which will come only with time, and especially after certain processes come to maturity.

Without making an in-depth analysis - which is impossible here for obvious reasons - it must be said that even now the question seems connected with the evolution that will occur within the European Union in the coming years. If the latter

will be able to give itself real foreign and defence policies - and it will take several years to attain these objectives - one could speak, on certain conditions, of a real US-EU partnership. If this does not occur, it is better not to have too many illusions. In limited and restrainable crises, the European countries could act autonomously, but when and where the diplomatic skirmishes escalate to facts, i.e. to military operations of remarkable importance, the weight of the North American giant will, or will again, be decisive.

The obstacles to overcome in order to achieve real European foreign and defence policies are enormous and cannot be avoided. They can be detected, first of all, in the attachment to national sovereignty, justified by the European countries' great traditions, but not by their political, economic and military dimensions. They can also be found in the different conceptions of the various General Staffs, bound to their experiences and not always inclined to think in «European» terms (also when they issue their specifications). Moreover, in the fields of both research and production it is very difficult to establish, or strengthen, multilateral cooperative relations among the European industries of defence, with the threefold aim of establishing multinational industries, comparable for size to the big American concerns, developing new systems and attaining in this way a real European standardization.

There is yet another important obstacle to consider, a political hindrance that throws a shadow of ambiguity on several relationships. Four members of the European Union - Austria, Finland, Ireland and Sweden - are not NATO members, while three others - Iceland, Norway and Turkey - are members of NATO

but not of the European Union (albeit Turkey is bound to the EU by a customs agreement) and are also associate members of WEU (Western European Union, linked with NATO, which ought to be the «armed

Right.

The Eurofighter 2000 (EF 2000) is very likely the most important multinational European programme, and will be adopted by the Air Forces of the UK, Germany and Italy.

Below.

The British nuclear submarine HMS «Victorious» is equipped with sixteen US-made «Trident II» ballistic missiles.





hand» of the European Union). The intermingling is made even more complicate by the fact that Austria, Denmark (which belongs to NATO), Finland, Ireland and Sweden have the status of observers at WEU, while various countries, members of the former Warsaw Pact or even of the Soviet Union, such as Bulgaria, Czech Republic, Esthonia, Latvia, Lithuania, Poland, Rumania, Slovakia and Hungary, are special WEU partners. Clearly, the impossibility to disentangle this politico-juridical knot (which is made worse also by the persistent tension between Greece and Turkey and between the latter and the European Union) will make it difficult to talk about European foreign and defence policies. It is equally clear that it will take years of difficult negotiations to obtain this result and to form a real partnership US-EU in the ambit of NATO.

Evidently there is a very close and mutual relationship of

interdependence between NATO's enlargement and the European Union's: they affect each other by limiting or increasing their scope. Therefore the just started, and for the time being only partial, extension of NATO to the East must be considered, like those that will follow, just the beginning of a process that needs a long time to ripen. Nevertheless, it is necessary to consider its technical implications as from now, in order to lay the doctrinal and practical foundations of the new strategy (today they can only be assumed) that NATO will have to adopt in the next century. It is appropriate to start from the present situation.

Today NATO can operate only on the basis of a temporary strategy of rapid intervention, within a rather limited range, with the decisive contribution of the American forces. Let's not delude ourselves about it. Only the US have the organization and the means necessary to carry out substantial interventions on a planetary

scale: the rapid intervention forces of the European countries, also of those militarily best equipped, have a limited significance and in case of strong contrasts can only operate under the protective American umbrella and with American logistic support. The reasons for this are manifold and deserve some investigation. During the cold-war decades the US developed the means necessary to conduct any type of warfare on a planetary scale: from global nuclear conflicts to conventional conflicts of diverse duration or extension. Therefore, today, besides having a powerful strategic nuclear deterrent, the US, with its conventional forces, can carry out decisive interventions in any part of the world.

This capability is based on:

- strategic bombers that can carry out offensive operations with both nuclear and conventional weapons at intercontinental range, relying on in-flight refuelling;

- a wide net of oversea bases located in allied or friendly countries (the use of this bases, on the other hand, may be subject to more or less serious political and/or legal limitations);
- a powerful tactical air force (subordinate, like the bombers, to the Air Combat Command) which, thanks to generalized in-flight refuelling, can be promptly transferred, all or in part, from Theatre to Theatre;
- powerful CVBG's (Aircraft Carrier Battle Groups), consisting of aircraft carriers and escort units, able to exercise both a strong air power and to contribute to aircraft and antimissile defence of the US territory and, if necessary, also of the territories of the allied or friendly countries;
- powerful formations for amphibious or triphibious operations constituted by specialized naval units and mighty US Marine Corps Units;
- a huge logistic structure, whose strong points are, besides aircraft and ships capable of carrying the heaviest materials over intercontinental distances, prepositioning ships stationed in strategic areas and large inland depots for the storage of tanks, artillery, engineers' material etc., immediately employable by Army and Marine units transferred to the area;
- last but not least, powerful Army and Marine units supported, if necessary, by well trained, readily employable reserves. These elements confer to the United States unique strategic capabilities determined by a clear superiority - that can be «measured» in decades and billions of dollars - in some key sectors: from that of strategic bombers (no European country is capable of developing, producing and managing aircraft of that category) to that of intercontinental



Above.
The British Ultralightweight Field Howitzer (UFH) was the winner of a competitive bidding held by the US Army for a «light» 155 mm gun.

Right.
A PzH 2000 155 mm self-propelled gun.



ballistic missiles, from the space sector to the sectors of telecommunications, great aircraft carriers, (with their embarked multivalent wings), AWACS (Airborne Warning And Control System), great transport aircraft, amphibious assault ships and logistic ships. The list could continue but, at this point, we think it's enough.

Clearly it is unthinkable to try to compete with the US in these sectors. The Europeans could instead play other cards. Provided that they be capable of creating a unified industry for defence, with concerns of adequate dimensions and the cooperation of firms - like the Swedish firms, for example - which, although they belong to countries that currently are not NATO members, already work with standards compatible

with NATO's. In this way, it could be possible to attain, through a comparison of the best materials, an admittedly partial Euro-American standardization.

Actually, especially in the armament and land equipment sector - tanks, towed and self-propelled artilleries, light and heavy armoured cars, tank carriers, motor vehicles, Engineer equipment, battlefield control systems, etc. - many



Above.
A «Stealth B-2» bomber approaches a tanker for refuelling.



European products are doubtlessly comparable to similar US products. They have a weak point: non-standardization, which makes it difficult, if not downright impossible, in case of conflict, to have substantial multinational forces operate together.

Also in other sectors, the Europeans have something to say. Provided that they join forces. To make just a few examples, they can develop excellent fighter and attack

aircraft, tactical missiles, radar systems, satellites, high-technology naval units, etc.

To close - but not to conclude, because the question deserves a much deeper study - we can express some cautions considerations. Or wishes.

If the Europeans manage to express joint foreign and defence policies - the latter understood in its wider meaning and therefore also in its scientific, technological and industrial implications - we

could speak of a real EU-US partnership within NATO.

This means that, on these assumptions, it will also be possible to design a wider-range NATO strategy, within which the European «weight» is an effective one. Otherwise, the US-Europe technological gap will widen, and NATO's enlargement will increase the strategic - and presumably, also political - dependence of Europe on the United States, instead of reducing it.

□

** Contributor to Italian and foreign military magazines; writer of essays on international politics, economy and contemporary history*

Photos from the Author's personal archives.

Interview With the Chief of Staff of the Norwegian Army

by Enrico Magnani *



NORWAY

THE NEW ARMY



Also the Norwegian Army faces the challenge of a renewal, made necessary by budget limitations and changes in the politico-strategic scenario.

The objective is to obtain an instrument reduced in size but flexible, mobile and well equipped, able to face any type of threat.

Maj. Gen. Sverre Økland, Chief of Staff of the Norwegian Army, discusses these subjects with us.

What is the present situation of the Norwegian Army? What are the perspectives and what major programmes are planned?

Since 1993, the Norwegian Army has been reduced by almost 50% in terms of number of units and total personnel strength. Today we have a total of 6 brigades, from the previous 13. One might say that the Army is reduced in quantity, but this is compensated by the quality of the fighting forces, which is substantially enhanced.

The restructuring of the remaining units is in good progress. The new war-time organization of our main combat unit, the 6th Division, was

finalized, by April 1, 1997, and put into effect by Jan 1, 1998.

The Norwegian Army will not be able to modernize all of its present units. New equipment is concentrated in the 6th Division and units earmarked for Peace Support Operations. The rest of the Army table of equipment is made up by the equipment that the Army already possessed during the Cold War order of battle of thirteen brigades. In addition, as a minimum, three independent brigades will be modernized with new C2IS. Great effort is also being put into weapon simulation systems and tactical training simulation systems. This in order to enable an organized transition from an



A column of motor sledges. The maintenance of high off-road mobility in difficult orographic conditions is a high priority for the Norwegian Army.

Attrition-Warfare-based army to an army oriented towards Manoeuvre Warfare.

The Norwegian Army will use approx. 2,5 billion NOK each year on new equipment in the period 1999-2004. This is planned to increase to more than 3 billion NOK each year from 2005.

This is heavily dependent on the efforts made to reduce the present O&M costs (approx. 4,5 billion per year).

The major ongoing procurement

programmes are the following:

- CV 9030 infantry combat vehicle (103 pieces);
- 12 MLRS-systems;
- digital VHF-radios (Multi-role);
- army C2IS;

Major planned procurement programmes:

- New MBT (Main Battle Tank);
- Medium range anti tank weapons;
- NASAMS anti aircraft system;
- light infantry terrain vehicles;
- replacement of the M-109 artillery system.

The Norwegian Army has a long experience in peace supporting operations, from Korea to Bosnia. Today, Norwegian soldiers together with other Scandinavian, Polish and Baltic comrades, are serving in the NORPOL Brigade in SFOR. What does this mean for the Norwegian

Army and the participation in peace-keeping operations?

First and foremost the participation gives officers, men and women of the Army a unique opportunity to serve within an operational multinational NATO-led Army Corps formation. This gives us the possibility to draw experience from the practical application of NATO principles, doctrines and regulations in an ongoing operation. This will benefit the individual, as well as the Army as a whole.

Secondly, it gives the Army the possibility to gain more experience from the use of national organization, training-programs and equipment.

However, the participation



Two Norwegian soldiers with the aiming/guiding system of the antitank «Hellfire» missile.

pulls huge resources from our national commitments, thus there will be a continuous evaluation of the balance between benefit and cost.

After the establishment of the Telemark battalion, Norway is a full participant in the Allied Mobile Force, the most important element of NATO's Immediate Reaction Forces.

Will we in the future see Norwegian soldiers training in Italy?

The Telemark Battalion participated in exercise *Dynamic*

Mix and Ardent Ground in Italy last year. The current exercise schedule of the Commander AMF (Land) is subject to approval by SHAPE and to the fixed priorities.

Today, there are no plans for the Telemark Battalion to participate in training in Italy in the near future.

Until now, the Norwegian Army has not assigned combat units to the ARRC. Will this situation change in the future, and will Norwegian soldiers take part in other units of the ARRC structure?

Norway has made commitments for participation in NATO's reaction forces. According to the White Paper of 1997-98 from the MoD, we intend to maintain the level of the present

contribution. However, the White Paper still says that the question of new commitments to NATO's multinational force structure may be a matter of judgement. Initially we may look for possibilities to place minor new formations at the disposal of ARRC or AMF(L). Norway may also participate with officers in HQ ARRC.

During the Cold War years, the Norwegian Army has been NATO's first line defence against the Warsaw Pact military structure. Will the fact that Russia is a fundamental member of the new Euroatlantic security system change the architecture of the Norwegian Army?

During the Cold War, the Norwegian Army had a concept



Above.

A team of riflemen of the «Telemark» battalion disembarks from a 6x6 AX 180 wheeled vehicle. The battalion, normally assigned to the Allied Mobile Force (Land), is now included in the SFOR «Nordpol» Brigade.

Facing page

«Leopard» 1A1NO tank in a live-firing exercise.

and architecture based on Attrition Warfare. The aim was to keep as much as possible of the territory intact by delaying an invader, in order to buy time for Allied reinforcements to arrive.

This concept and the Army architecture have changed fundamentally. The Army initiated in 1993 a process of implementing a new concept based on Manoeuvre Warfare. Education of officers and training of units have both been changed substantially in order to be in line with the new concept. Furthermore, the Army Procurement Plan is now concentrating on relevant equipment for a manoeuvre-warfare-oriented army.

The main task of the Norwegian Army is, as the land component of the Norwegian Armed Forces, to protect and defend the sovereignty of Norway, and to contribute to a credible anti-invasion force in one part of the country, for the time being initially located in Northern Norway.

In a traditional invasion scenario, Norway does still rely on NATO reinforcements. One part of the still ongoing process is the establishment of a new army doctrine. The document *Tactical Doctrine of the*

Army will be finalized in 1998, and is closely co-ordinated with the ongoing joint process of establishing a new national joint doctrine.

Sustaining a credible anti-invasion capacity is still the main objective of the Norwegian Army, while emphasis is also put on the participation in international Peace Support Operations.

Besides the co-operation with NATO, the Norwegian Army has a long tradition of co-operating with the other Scandinavian countries.

Has the joining of the Partnership for Peace program by two neutral countries, Sweden and Finland, changed some aspects of this cooperation?

The Norwegian Army has for a number of years enjoyed a fruitful co-operation with both Sweden and Finland on a bilateral basis, covering a wide range of activities. These include exchange of students at Staff Colleges, exchange-visits between Military Academies, military sports competitions and meetings and conferences at General Staff level. Furthermore, a comprehensive co-operation has been established on inter-Nordic purchases of military equipment.

The Nordic countries have also enjoyed a mutual beneficial co-operation on the subject of Nordic participation in UN missions. A formal body, NORCAPS, has been established to co-ordinate the nations' contributions. The more recent SHIRBRIG (Stand By High Readiness Brigade) for UN operations, has given co-operation even another angle. The Nordic countries have also obliged to conduct annually «Nordic Peace» exercises. Last year's exercise was held in Norway, and this year will take place in Sweden. In general, the introduction of Sweden and Finland into Partnership for Peace has strengthened and given new aspects to an already well established co-operation between neighbouring countries.

The Norwegian Army has increased the number of the professional component and reduced the number of conscripts.

Will you follow this path in order to have a fully professional army, or will the number of conscripts remain?

The Norwegian Army has no professional units, although we have some professional soldiers.

Conscription plays an important role in our country, and will still be one of the main elements in our Army.

All male citizens physically and mentally fit have service obligations from the age of 19 until the age of 44, females may volunteer. Most conscripts receive 12 months of initial training.

Some get less. On completion of



the initial training, the conscript will be discharged and assigned to a specific unit. Until the age of 44, the conscript will regularly be called up for refresher training and field exercises.

We intend to stick to the conscript system, and there will not be any professional Army in Norway in the years to come. Solutions other than conscription will not provide the necessary number of soldiers and will not obtain support from the population.

An almost all-professional force needs strong commitment in the social field as well as home programs, salary, educational programs etc.

What will the Norwegian Army do in order to help its professional personnel?

Some years ago the Norwegian Army started focusing on the officers' families. The Army wants the officers to move with their family when transferred. The Army Staff focuses on four issues:

- Educational possibilities for the spouses;
- Job possibilities for the spouses. The Norwegian system is built on a two-income family, and the

families' economy is mainly based on two incomes.

- Kindergarten - we try to make sure there is a kindergarten for children between age 1 and 6.
- A satisfactory housing standard.

Female personnel have been in the ranks of the Norwegian Army for several years.

If possible, could you give a short history and analysis of this component, and what are the perspectives of women in the Norwegian Army?

Today women are fully integrated in all fields in the Norwegian Army. The integration started in 1977, when the Officer Candidate School, non combat sectors, was opened to women. In 1983, the ordinary initial service was opened to women in voluntary terms, and in 1984 all positions were opened to women. The present highest rank for a female in our Army is major, but in the NATO/UN service we have some temporary lieutenant-colonels.

In 1997 the Norwegian Armed Forces established a strategic plan for gender equality. This plan is focusing mainly on two important issues:

- How to make women apply for

Officer Candidate School.

- How to make female officers choose the military as a career.

This plan is our working document and we hope will help us to reach the aim of 7% women in the Armed Forces in the year of 2005.

In comparison with the defence budgets of the other NATO members, the Norwegian Defence Budget has maintained its Cold War level, and you are still aiming to increase the procurement share of the total budget. How is this possible?

As stated in the response to your first question, in order to be able to increase the share of the budget spent on acquisition, we have to reduce our O&M costs. The Defence Budget will probably be maintained at its present level, in the years to come. Taking into account the continuously rising cost of the new equipment, the only way we have of financing our procurements of new equipment is by reducing the O&M costs of the peace-time army. This will be achieved by a further downsizing of the peacetime level of the Army. This is not an easy process, but I remain confident that we will



Members of the crew of an 81 mm mortar installed on the back of a BV206 tracked vehicle.

Homeguard has proved its value for local authorities in peacetime emergencies.

Like the other services, the Homeguard is led by a Chief of Staff.

The 18 district commanders are all professional officers. In wartime, though, the land Homeguard will operate under the command of the Army territorial commanders.

The Homeguard share of annual military spending is less than 5%.

The increasing professionalism of the Armed Forces enhances the role of the reserve elements.

Are technology development and financial costs real obstacles for the interoperability between regular and reserve forces?

The Norwegian defence concept is based upon mobilization units. The Norwegian army has no professional units.

It is vital for us to have this in mind when we acquire new technology or adopt new tactics. There seems to be a trend in new military technology towards simplification and serviceability, which reduces the need for lengthy training.

When developing new materiel, we take in consideration the mobilization units' capability to learn to use the specific materiel through refresher training.

In Norway we also emphasize the use of training techniques supported by technology and simulators. This enables us to reduce training costs.

Since we don't have professional forces, by your term, there are no interoperability problems.

Will the reshuffling of the NATO system of command, control and communication -

achieve our aim of modernizing our Army according to the plans laid down.

The National Guard is a very important element of the Norwegian defence system.

What is the history of this institution, and what are its relations with society and the military world?

The Norwegian Homeguard was established after WWII.

The mission of the Homeguard is to secure the Total Defence mobilization and to support the Army, Navy and Air

Force in their operations.

With less than four hours call-up time and yearly training of 83,000 officers and men in all parts of the country, the Homeguard is truly living up to its slogan: «Everywhere - anytime».

The Land Homeguard mainly consists of platoon and company size units, while the Naval Homeguard patrols our coastal waters with a large number of minor vessels. The Air Homeguard will perform airbase defence operations.

On several occasions the decentralized organization of the

A CV90 tracked vehicle proceeding on the difficult Norwegian terrain.

first with the fusion of AFNORTH with UKAIR and the consequent establishment of AFNORTHWEST, and now its integration in AFCENT, change in some measure the contribution of the Norwegian Army to security and stability in Northern Europe?

The fact that the NATO command structure has been greatly reduced over the last ten years is merely an adaptation to the changed security environment, and to the new and different tasks foreseen as a result of that.

The Norwegian Army's contribution to NATO is not influenced by these changes, even though NATO's new missions may increase the demands on our reaction forces.

In the past, NATO emergency plans earmarked relevant forces (US, British, Canadian and German units and soldiers), for the Defence of Norway.

Has the new strategic situation in the northern region changed the Allied effort for the area?

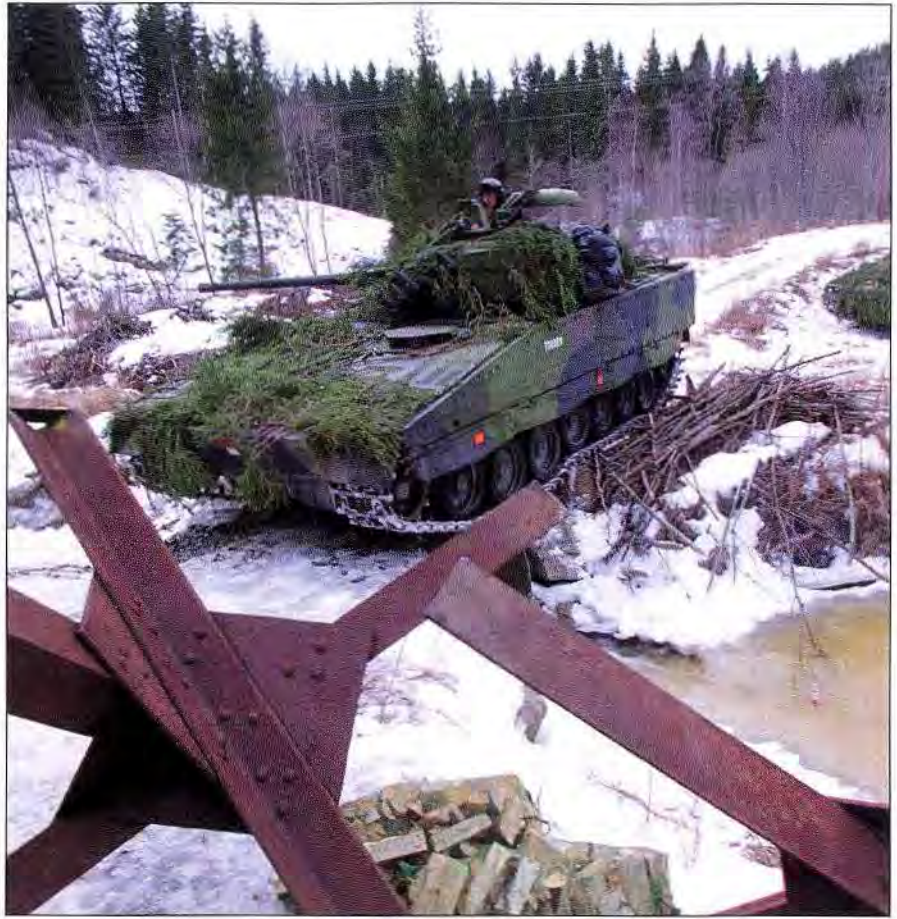
In line with the earlier concepts, the main contribution is American, with the *Norway Air Landed Marine Air Ground Task Force, NAL MAGTF*. In addition, different units of the Alliance's Reaction Forces and two artillery battalions (GE and US) are in the NATO Composite Force (NCF).

The United Kingdom and the Netherlands have central functions in the reinforcement plans for Norway, including the UK/NL Amphibious force.

The *Allied Command Europe Mobile Force (Land) - AMF(L)* will be a primary crisis management tool in our region.

□

** Journalist*



Maj. Gen. Sverre Økland was born on Jan 4, 1941.

He attended the Military Preparatory School, and obtained the Military Matriculation Degree; the Military Academy, the Camberley Army Staff College; the Royal College of Defence Studies in the United Kingdom.

Promoted to the rank of Cavalry Lieutenant in 1966, he served at the Cavalry School and the Reconnaissance Company of the North Norway Brigade.

As a Captain, he served as an instructor at the Military Academy.

After his promotion to Major, he was Secretary to H.R.H. the Crown Prince and Operations Officer of the Troms Land Defence District.

From 1984 to 1987, Lt. Col. Økland served at the Office of the Inspector of Cavalry, and commanded an Armoured Battalion of the North Norway Brigade.

In 1987, promoted to the rank of Colonel, commanded the Cavalry Regiment South until 1989, when, promoted Brigadier General, assumed the position of Chief of the Army Staff at the Headquarters Defence Command Norway.

In 1992 Maj Gen. Økland was given Command of the Land Command Vestlandet and in 1996 was appointed Chief of Staff of the Army.

Major General Sverre Økland is decorated with the National Service Medal and the Defence Service Medal with two Stars.

DENMARK

THE NEW ARMY



Interview with General Christian Hvidt Chief of the Danish Defence Staff

by di Enrico Magnani *



The new politico-strategic scenarios ensued from the end of the bipolar system have had a strong influence on the Danish Army. Therefore, a difficult rationalization process is now under way, in order to enable the land forces to assume a more and more incisive role in humanitarian and peace-support operations. This and other issues are expounded to «Rivista Militare» by Gen. Christian Hvidt, Chief of the Defence Staff.

Today the Danish Army is a military instrument limited in size, but with high capabilities. How will the land forces be organized at the beginning of next century?

Due to Denmark's membership of NATO, the Danish Army has a long tradition for extensive military co-operation with other nations in Europe. Situated at the gateway to the Baltic Sea region, during the Cold War Denmark was very dependent on NATO co-operation and trained regularly with the dedicated reinforcements.

The Danish Army was - and still is - connected to NATO's command structure through Allied

Command Baltic Approaches (BALTAP). BALTAP was politically approved in the autumn of 1961 and established in January 1962. BALTAP is a joint command responsible for all military operations in the area covering Denmark, Schleswig-Holstein north of the river Elbe, parts of Skagerrak, Kattegat, the Danish Straits, and the Baltic Sea.

Subordinate to BALTAP are two army corps: Allied Land Forces Zealand (LANDZEALAND) and Allied Land Forces Jutland and Schleswig-Holstein (LANDJUT).

During the cold war, the mission of LANDZEALAND was to defend the Zealand archipelago with Danish forces and allied

reinforcements. Through the years we have enjoyed participation in NATO exercises of the Italian Alpini battalion assigned to ACE Mobile Forces (Land) - AMF(L).

Corps LANDJUT consists of both Danish and German land forces. The mission of LANDJUT - consisting of one German and one Danish division, incl. support troops - was basically to defend the Jutland peninsula and Schleswig-Holstein.

The changes in the European and global security situation after the collapse of the Soviet Union and the Warsaw Pact have had great influence on the Danish Army.

The overall political directives for the modernization of the Danish Defence have been formulated in the Defence Act from December 1993. The tasks of the Danish Army have widened from the traditional regional role to include a global dimension. In accordance with the Defence Act, army contributions to conflict prevention, peace support, and humanitarian operations on a global scale have been given high priority during recent years. The effect of this has been a modernization of the army, including adjustments of the army structure, training and operational and multinational activities. Although substantial and still increasing weight is given to international relations and activities, political authorities have stated that the main task of the Danish Armed Forces still is to maintain Denmark's sovereignty and guarantee the continued existence and integrity of the nation. The modernization and development of the army is still in progress. The modernization program is carried out in accordance with Danish foreign policy and defence policy.

The aim of the restructuring - guided through the successive Defence Agreements between the

political parties - has also been to ensure the financial basis for participation in peace support operations, adequate training and exercises, and enhanced materiel standard, primarily for our contributions to international tasks. This financial basis is ensured by means of reductions in both the wartime structure and in the peacetime organization. The peacetime organization has been reduced by amalgamation of regiments and army schools as well as by disbandment of peacetime and infrastructure facilities, i.e. barracks, depots etc.

The wartime structure consists of:

- a light recce unit, assigned to AMF(L). This was the unit that participated in the Italian-led operation ALBA in 1997.
- the Danish Reaction Brigade (DRB) with 4,500 soldiers;
- a company for electronic warfare;
- long Range Reconnaissance Patrols from the army's Special Operations Forces (SOF), all assigned to the ACE Rapid Reaction Corps (ARRC).
- the Danish Division (DDIV), composed of divisional troops and three mechanized brigades;
- troops for LANDJUT (CLJ), including a signal battalion, an engineer battalion, and an artillery battalion;
- the Jutland Combat Group (JCG), a brigade-size formation, partially mechanized with tanks and armoured personnel carriers, assigned to COMBALTAP.
- allied Land Forces Zealand, which include corps troops, the Danish Reaction Brigade in its national role, two combat groups (CG), and Military Regions V - VII;
- four Military Regions (MILRGN) of the Jutland-Funen area; with local defence battalions and various support units.

Integrated in the Military Regions is the Home Guard, with a total of around 66,000 men and women.

The peacetime structure is tailored to the production of units to the wartime structure



and to plan and carry out international missions.

Consequently, in peacetime the Army is organized with elements for production of units for the wartime structure, i.e. schools and regiments. And, on the other hand, elements for «operational planning and advanced training of the units».

The peacetime structure contains also the Army Aviation and camps with training facilities. The overall management of international missions is conducted by the Army Operational Command (AOCDEN).

The Danish government is currently making a study over the possible future structure of the Armed Forces. A white paper is expected to be finished by the



Female personnel are employed in all Services and Branches of the Danish Armed Forces.

main battle tanks of the type Leopard 2 are under procurement.

In the ARRC structure there is a reconnaissance Brigade, which includes a long-range special-forces Danish company. How will this unit cooperate with the other formations of the Brigade, where there are also Canadian specialists and a company of the Italian «Col Moschin» 9th Regiment?

Denmark's contribution to Allied Command Europe (ACE) Rapid Reaction Corps also comprises Long Range Reconnaissance Patrols (LRRP). These patrols are part of the Danish Jaegerkorps, a special Forces Unit which dates back to 1785. In its present form, the Danish Jaegerkorps was established in 1961. It consists of three detachments operating in small patrols. The selection of personnel is based on a rigorous 16-week selection course. From each course of approximately 120 applicants only 4 - 5 have the ability to get through the test. Therefore, it is a very exclusive «club», and over the years only a very limited number have been able to pass the test and become Jaegers.

The LRRP takes part in a very extensive exchange and training program with exercises especially with the Italian 9th Regiment Incursori «Col Moschin» and the British Special Air Service (SAS). In the framework of ARRC an annual exercise series called ASSEGAI EYES is conducted with the participation of British, Italian and Danish Special Forces. The latest exercise in 1997 was conducted in Denmark.

LANDJUT was the first multinational NATO Corps. How is this Headquarters organized, and what are its subordinate units?

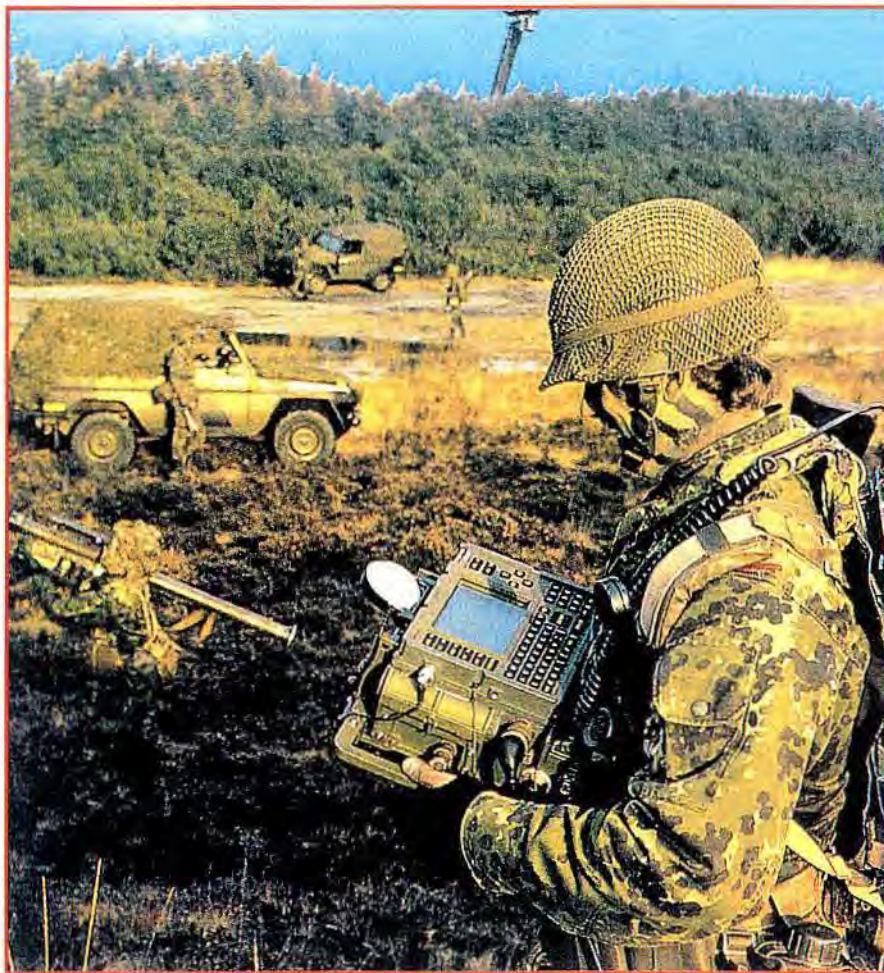
end of 1998. So far, there are no conclusions, but it is stated that the focus of the Army in the future will remain on the ability to take part in international peace support operations.

The Danish Army assigns to NATO a considerable part of its operational capability. The recently established Reaction Brigade, besides being earmarked for out-of-area interventions, has been assigned to a British Division of ARRC. Has the Brigade already reached its full operational capability?

The Danish Reaction Brigade is the main Danish contribution to NATO's reaction forces. It was

established on 1 July 1994. This event marked a new role of the Danish Army with emphasis on international missions under the auspices of NATO as well as the UN and OSCE. A rather unconventional and financially deliberate method was applied for the establishment of this quite considerable stand-by force. Recruiting campaigns have been conducted to reach the brigade organizational strength of approximately 4,550 and the brigade was fully operational by 1 January 1997.

In the present Defence Agreement it is foreseen that the brigade will be further strengthened in order to improve the security of the personnel and the combat power. Thus new armoured vehicles and



Left

Low-altitude antiaircraft system of the Danish Army.

Facing page

M113 tracked vehicles in exercise.

It is a tribute to the present political stability of Western Europe that a multinationally manned Allied headquarters has existed in the Northern German town of Rendsburg since the end of World War II. In its present form, the headquarters' history dates back to 1961 at which time an agreement on the creation of a new command organization for the defence of the Baltic Approaches was reached. As a consequence, the Corps with its headquarters in Rendsburg was designated as Allied Land Forces Schleswig-Holstein and Jutland, with an area of responsibility which also included Hamburg and the Danish island of Funen. It was then manned by American, British, Canadian, Danish and German personnel. LANDJUT became the main land force component of the tri-service command of the Allied Forces

Baltic Approaches (COMBALTAP), whose headquarters was established at Karup in the Jutland peninsula. This concept remained unchanged for more than 30 years. Throughout that time LANDJUT was the only multinational corps headquarters in NATO, the forerunner of what has become accepted as the norm (six of the eight corps in NATO's Central Region are now multinational). Following the dissolution of the Warsaw Pact, NATO went through significant changes in its structure. From 1994 the headquarters of NATO corps, as a general rule, were no longer funded centrally by the Alliance, but became the financial responsibility of the most involved nations. Since both major contributors to LANDJUT, Germany and Denmark, agreed with SACEUR on the importance of retaining a multinational corps

in the area, they signed a Memorandum of Understanding. This memorandum now forms the basis for the manning and funding of the headquarters and for provision of forces to the Corps which is a part of NATO's Main Defence Forces. Although there are presently no American or Canadian officers in the staff, Headquarters LANDJUT retains its international status as a multinational headquarters.

The tasks and the role of LANDJUT have changed after 1989. The area of operation has been widened to include the area south and east of Hamburg, and the garrison area now includes the Danish island of Zealand and the German Bundesland Mecklenburg-Vorpommern. Furthermore, emphasis has changed to NATO's dialogue of co-operation and partnership with the Eastern European countries. The main bodies of LANDJUT are today the Danish Division and the 14th German Division.

Furthermore, both Germany and Denmark contribute with corps troops.

Headquarters LANDJUT is now in Rendsburg, Germany; in view of Poland's imminent entrance into the NATO structure, the Defence Ministers of Poland, Germany and Denmark have recently planned the constitution of a trinational Corps. Could the establishment of this major unit modify the organization of the Danish Army?

With the Partnership for Peace co-operation and the planned enlargement of NATO with Poland, Hungary and the Czech Republic, NATO is facing a new era. This will affect the Danish

Army substantially. Poland is expected to join NATO in 1999, and at the same time the creation of a new multinational (Polish, German, Danish) Corps on the basis of LANDJUT is planned. The name of the new corps will be Multinational Corps North East (MNC NE). Its headquarters will be placed in Stettin in Poland. The headquarters is expected to be operational from the end of the year 2000. The forces will consist of national divisions and brigades from the three countries: the 12th Polish Division, the 14th German Division, and the Danish Division. The new corps will fit into NATO's strategy and be prepared for Article 5 operations as well as crisis management, peace support, and humanitarian missions.

Denmark has made known its intention of participating in NATO's Immediate Reaction Force, which is a symbol of Atlantic solidarity. Will Danish soldiers come for their training also to countries of the Southern Region, like Italy?

Denmark contributes to NATO's Immediate Reaction Forces with a light reconnaissance unit. The unit, of company size, participates in ACE Mobile Force (Land) AMF(L)) major activities including exercises. From the year 2000, the unit is expected to be ready also for extreme climatic conditions including winter warfare.

Danish soldiers participated in the operations in former Yugoslavia, both under the UN flag and within IFOR/SFOR. What lessons have been learned from this long peace-mission?

Denmark has a long tradition in peace support operations. Over the years about 50,000 Danish soldiers have participated in peacekeeping missions, and we have collected a variety of lessons learned. Today Denmark contributes almost 1,000

soldiers to peace support operations, and there are no indications that this number will decrease in the near future. For the time being, we are considering, in close co-operation with the Netherlands and Austria, to contribute to a peacekeeping force to Western Sahara (MINURSO).

Denmark's participation in the missions in Former Yugoslavia, first under the UN and later under NATO in IFOR and SFOR, has been of great value for the development of the Army. This involvement has brought new challenges for the training and procurement of equipment. In view of the lessons learned, and the development in peace support operations, we foresee a demand for - and the necessity of - modern and efficient equipment, which not only will make it possible to co-operate and carry out the missions, but even more vital - protect and secure the participating personnel. In co-operation with Estonia, Latvia and Lithuania, our engagement in Former Yugoslavia has also been used as a common training platform where different units from the three Baltic nations have participated as part of the Danish Battalion.

A multinational planning cell for peace operations, SHIRBRIG, has been operational for some months at Høvelte Barracks, near Copenhagen. Several Nations participate in this activity, and many others have shown a great interest in the project. Could this cell become a Staff, oriented towards peace operations?

The establishment of a UN Stand-by Forces High Readiness Brigade (SHIRBRIG) was started in 1994 on a Danish initiative and will be composed of contributions from so far 12 countries (Argentina, Austria, Belgium, Canada, The Czech Republic, Finland, Holland, Ireland, Norway, Poland, Sweden, and Denmark). It is planned to become operational in 1999. The headquarters is already established in Denmark with staff officers from the troop-contributing countries. It is meant to be able - on short notice - to participate in peacekeeping and humanitarian missions. The brigade will be composed of national contributions according to the so called «UN Stand-by Arrangements System». This practise will reduce preparations and improve procedures, training,





«Leopard 1A5» with camouflage system.

and planning to a common basis.

In spring and summer 1997 a Danish reconnaissance company participated in the Multinational Protection Force in Albania. This was the first massive European-only peace mission. Considering the experience of the Danish Army has in these operations, what is your assessment of the FMP, where, for the first time, there was a close cooperation among UN, OSCE, EU, WEU and Italy, which was responsible for the entire mission?

The reason why Denmark all the way through has been participating in the Balkan peace support operations should be found in an overall wish for a stable and secure Europe. Denmark could not passively

accept the crises in Former Yugoslavia, which escalated and inflicted severe damage to the whole region. Therefore, Denmark also had a clear wish to be a part of the Multinational Protection Force (FMP) in Albania.

The FMP-mission in Albania demonstrated in the finest way the ability of European countries to co-operate in an international mission. As mentioned, Denmark participated with the light reconnaissance unit which is part of AMF(L). The unit gained much experience in preparing for and deploying to a new mission on short notice.

The professional component is now two thirds of the Danish Army personnel; conscripts represent the remaining third. Is it possible to envisage a further increase in long-term volunteers and a contemporary reduction of the number of conscripts?

The Danish Army is mainly based on a mobilization principle.

In most of the Army peacetime units, conscripts are called up and trained in periods of 8 to 12 months. After the training period, the soldiers are transferred to mobilization status in the wartime structure. In order to be ready for mission employment, the units must conduct a supplementary training of 4 - 6 weeks. Some units, for instance tank and signal units, are manned by professional soldiers due to the complexity of the materiel and equipment. Following the mobilization principle, one of the basic and necessary tasks of the Army is to produce units and forces for the wartime structure. Thus the Army is traditionally divided in a peacetime structure and a wartime structure. This double-structure has been maintained during the modernization and development of the Army in the nineties.

The intent is to continue this mobilization principle based on conscription.

Denmark has a long tradition for employment of female personnel in the Armed Forces. Female personnel are employed in all services and arms, including combat arms. Currently, we are conducting a campaign to motivate women further to join the armed forces and make a career in one of the three Services.

The regular reserve enables the Danish Army to triple its structure in a very short time. Considering the large number of reservists, is it possible to maintain a real interoperability between this component and the units on active service?

As mentioned previously, the Danish Army is based on a mobilization principle. This means that a large part of the Army is composed by reserve forces. In order to make reserve force units meet required standards, an efficient training system is necessary. The Danish training system includes Basic Training and Supplementary Training in order to prepare the units for Article 5 operations as mentioned above. Units involved in international and peace support operations are subject to Mission Oriented Training of approximately two weeks.

Units in the Danish Reaction Brigade furthermore go through two weeks of Refresher Training at fixed intervals.

Supplementary to this system, an intensive training program is conducted with leaders and muster training with units in order to maintain the required levels of training. With this system, the Danish Army ensures the required training level for both active and reserve units, and thus interoperability between the units.

Together with the reserve, Denmark has, like the other Scandinavian countries, a robust

Home Guard. In view of its diffusion at every level of Danish society, can the presence of this militia be considered a channel for communication and dialogue between society and the military?

A very important part of the Danish defence is the Home Guard. You may say that it is an expression of the will of the Danish population to defend the nation. It is an organization manned with voluntary personnel and with a limited number of regular personnel. The strength of the Home Guard is approximately 66,000. The Home Guard was established in 1948 by an Act of the Danish Parliament. It is divided into three services with a land component, a naval component with patrol vessels, and an air force component with

a Ground Observer Corps. Although the capabilities of the Home Guard are limited, it is the intent of the Danish Government to widen the spectrum of its tasks. Especially some of the tasks related to local defence units will gradually be taken over by the Home Guard. As an integral part of the study over the possible future structure of the Danish Armed Forces, the structure and the role of the Home Guard will also be analyzed.

The conclusions of the study have - as previously mentioned - still to be made, but I am sure that the Home Guard will also in the future be an important component of the Danish Armed Forces.

□

**Journalist*

General Christian Hvidt was born in Copenhagen on July 15, 1942.

Lieutenant in 1962, he was promoted to the rank of Captain in 1962, and to Colonel in 1987. Gen. Hvidt is a test pilot, and held important positions, both in command and Staff appointments.

He commanded the First F-16 Squadron and was Staff Officer and Branch Chief of the Plans and Policy Division of the Defence Staff.

Other positions: Chief of Staff, Tactical Air Command, Deputy Chief of Staff for Plans and Policy; Deputy Chief of Staff for Operations, Budget and Finance.

In 1986 was appointed Chief of the Defence Staff. He has been awarded several Danish and foreign decorations.

General Christian Hvidt is married and has three children.

HUMAN RIGHTS

PRAGMATISM AND AMBIGUITY

by Ornella ROTA *



The background of the page is a painting depicting a battle scene. In the foreground, soldiers on horseback are engaged in combat. A prominent figure on a white horse is seen from the side, facing the viewer. The ground is littered with fallen soldiers and weapons. In the background, a large, dark, and somewhat abstract stone structure, possibly a castle or a monument, rises against a cloudy sky. The overall tone is somber and dramatic, with a focus on the chaos of war.

The rights of man are sacred
and inviolable and no social
organization can
ignore them.

In the last two centuries, with
the success of the rights of
democracy, an enormous
progress has been made. But
much still remains to be
done. The enjoyment of the
fundamental liberties is the
prerequisite for peace, and
the international bodies have
the duty of guaranteeing and
protecting it.

ROME. The human rights concept characterizes the entire second millennium, in the West and not only. Its success during the last two centuries coincides with the diffusion of democracy and the progressive establishment of the constitutional State, which guarantees legality, confers consecration to the social contract, rejects the inhumanity of war.

Its remote precedents are the Petition and the Bill of Rights of seventeenth-century England and the Magna Charta of John Lackland (1215 - 1225).

The substratum nearest to us is the lay illuminist European culture: the Great Revolution's Declaration of the Rights of Man and of the Citizen laid down in 1789 for the national territory but signifying France's ambition to show herself as

liberator of the world. Earlier still, the declarations of some American states, and the United States Declaration of Independence (1776).

In parallel, in 1859 a lymph spreads from the blood-covered plains of Solferino: the international law on armed conflicts generally defined humanitarian law, which generates the International Red Cross and Red Crescent. Already

in 1864 (First Geneva Convention) it is stated as a norm, successively reaffirmed in other treaties - up to the four Geneva Conventions which in 1949 reformulate the entire matter, and to other more recent works - the concept that killing or harassing wounded and/or captured men is not only on inhumane but a useless, indeed a detrimental action, because if a combatant knows that falling into

the enemy's hand entails death or torture, he will fight to his last breath, he will never surrender.

A century ago, against the shameful «affaire Dreyfuss», and on the surge of Emile Zola's «J'accuse», in France the first League of the Rights of Man was born, which would prove essential in supporting the subsequent leagues persecuted by the various totalitarian regimes.

THE DECLARATION OF HUMAN RIGHTS IN ISLAM

Human rights derive directly from God's law (Shari'ah) and are therefore binding. Dated August 5, 1990 (14 Muharram 1411 H), this body of legislation is very similar to the UN Declaration, discordant in some aspects and more advanced in others, and on some points not exactly in agreement with the legislation of other Muslim states.

Muhammad Zamir, ambassador of Bangladesh to Italy, also accredited to Sarajevo and to the UN international organizations in Rome (FAO, IFAD, World Food Programme), cites from the Islamic Charter: «human rights are an integral part of the Muslim religion and as a rule nobody can suspend them, totally or in part, violate or ignore them». «The specification of even partial untouchability is very important», observes Zamir. A professional diplomat, with several university degrees (literature and fine arts in Dacca, Law in Dacca and Geneva, Arab literature and Arab language at Shemlan in Lebanon) Zamir has served in both Western and Eastern countries as well as with international organizations, such as the Islamic Conference (ICO, 54 Moslem member countries) in Jedda and at the UN Commission for Human Rights in Geneva.

A reason for dissent with the Charter of '48 surfaces in art. 2: «Except for the reasons provided for by the Shari'ah», it is forbidden to take anyone's life, maim or inflict corporal punishments. On the contrary, democratic non-Muslim countries largely refuse this type of punishments.

On armed conflicts, the ambassador observes, art.3 promotes the spirit of the Geneva Conventions: it prohibits to kill non-belligerents, such as old people, women and children and maim their bodies, as well as to fell trees, damage stored crops or victuals and destroy civilian buildings.

Advanced is also the protection of a person's reputation and honour, «wich, with us, continues also in the afterlife: State and society must protect also the dead from any outrage. Therefore it is permitted to exhume a body for an autopsy but not to destroy and transform a cemetery into a building ground».

Another difference emerges as regards marriage. Art.16 of the UN Declaration states the right to marry without restriction of race, nationality or religion; art.5 of the Cairo Declaration uses the same wording, omitting the word «religion». At the same time, it requires State and society to remove all obstacles and facilitate marriage procedures. «This», explains Zamir, «is because some Countries, although officially admitting marriages between locals and foreigners, actually interpose such and so many obstacles as to make them very difficult».

And now we arrive at the women's question, wich today is practically at the core of all debates on Islam. Art.6 of the Cairo Charter, first part, cites: «Woman is equal to man as regards human dignity, has rights to assert and duties to perform; has her own civil identity and financial independence, and the right to retain her family name and lineage». The second part says that «the husband is responsible for the sustenance and welfare of the family». Contrary to those who believe that Islam humiliates women, emphasizes the ambassador, «with us they have not only equal dignity, but a wife has a further right: to be sustained by her husband, also after the end or interruption of their marriage». According to the Shari'ah's norm, a man can have up to four wives, while the tendency of the modern Moslem states is towards monogamy.

Fundamental everywhere, the family is for Muslims an hinge based on blood ties (the Shari'ah, for instance, does not admit adoption). The protection of children is preeminent: parents, society and State must take care of their physical health, educate and morally assist them (art.7). «This is a concept», Zamir considers, «wich does not appear in the Declaration of 1948; to grow up and develop completely, we believe that mental health is as important as physical health; and, contrary to those who believe that Islam is integralist per se, art.9 states that every human being has the right to receive both religious and secular education».

Further provisions prohibit slavery, usury, economic exploitation, terrorism, instigation of racial, nationalist or doctrinal hatred, decree the right of peoples to liberty and self-determination, of citizens to freedom of travel and residence within the Muslim world, of the politically persecuted to hospitality and protection, (unless they have committed acts considered crimes by the Shari'ah). Work is considered a human right: «which», specifies Zamir, «must be assured by the State and by society. We have chosen this formulation, although we know that often this is not possible because many Islamic states are not rich». Synthesis and fulcrum are the last two articles: «All the rights and liberties stipulated in this Declaration are subject to the Shari'ah» (24) and «the Shari'ah is the sole source of reference to explain and clarify all the articles of this Declaration» (25).

The Charter was adopted by the XIX Conference of the Foreign Ministers of ICO, but not yet by the Summit Conference, i.e. by the Kings and other Heads of State.

On August 14, 1941 the Atlantic Charter signed by Roosevelt and Churchill on a ship in the open ocean, stated the fundamental liberties that should be granted to every human being, first of all freedom from terror and from need.

On December 10, 1948 the UN General Assembly approved the Universal Declaration of the Rights of Man, which is at the root of the Atlantic Alliance and the United Nations.

Since then, there has been a rapid succession of Conventions, pacts, treaties: all for the safeguard of the dignity of living, in peace and in war: «We must look at the Declaration of 1948 as a kind of baobab», says Paolo Ungari, «a big tree that continues to put forth branches which reach down to the ground and in their turn become trunks that produce other branches».

Dr. Ungari is a regular professor at the Luiss University, where he heads the Institute of Politico-historical Studies and the Centre of Studies and Research on the Rights of Man; he is the chairman of the Human Rights Commission at the Prime Minister's office; represents our Country within the European Council's «Racism, Xenophobia and Antisemitism» Commission and is the vice-president of the Italian Atlantic Committee.

«In 1948» the professor recalls, «the turning-point consisted in

THE EUROPEAN DECLARATION OF THE RIGHTS OF MAN AND OF THE FUNDAMENTAL LIBERTIES.

BRUSSELS. The Countries that want to be part of the European Council are expressly requested to undertake to abolish the death penalty. Recognition to European citizens of the status of subjects to international law: the European Union - states the Maastricht Treaty - respects the fundamental rights as guaranteed by the «European Declaration of the Rights of Man and of the Fundamental Liberties». An article (8) reaffirms the non-retroactivity of the penal law, except for war crimes, declared «indefensible» both by the United Nations and the Council of Europe. «Signed in Rome, Palazzo Barberini, on November 4, 1950, and come into force on September 3, 1953», points out lawyer Paolo Fiorillo, «this text—together with a subsequent protocol — transformed a system of universal ethical values into the rules of an international legal mechanism, to which recourse can be made also through individual petitions».

Paolo Fiorillo, who operates in the field of civil and commercial law, is the holder, with other colleagues, of an office in Brussels which deals with questions concerning the European Community». Of all the principles proclaimed by the United Nations in 1948», he continues, «most have become obligations and, for the first time in the history of the law of nations, a European citizen enjoys a jurisdictional protection precisely because he belongs to the member States». There are two bodies responsible for the protection of the States and the individuals: the European Commission and the European Court. The former, with administrative screening functions, examines the acceptability of the various petitions and, should that be the case, transmits the documents to the Court. Possible sanctions are money penalties, generally to the order of a few millions, «mostly symbolic, owing to the enormous difficulty in actually obtaining them».

The analysis of recent data shows that Italy in 1997 has incurred 395 sanctions for infringements of the Convention, 390 of which concluded at the preliminary stage. Italy is indicted above all for the length of its criminal and civil proceedings and the duration of preventive imprisonment.

«In our Country», the lawyer continues, «in the civil-law field there is a bulky contentious jurisdiction as regards the expropriation of urban areas, the declarations of public interest and, in general, the unjust treatment of the citizen's property, also the foreigners'. As regards penal law, there are several questions concerning judgements by default, public security's preventive measures, legal aid and free defending counsel. Considerable is also the number of appeals regarding taxation».

Kriegsgefangenenlager Camp des prisonniers de guerre	Stalag XIII B, Gef.-Nr. 70.445	Datum Date	18/12/40
Name Nom	Pompidou	Vorname Prénom	Georges
Dienstgrad u. Truppenteil Grade et Unité	Oberstleutnant 678 ^{er} Reg. de Pionniers		
Geburtsdatum Date de naissance	30 Mai 1906	Geburtsort lieu de naissance	Le Bourcat (Gironde)
Letzter Wohnort Dernier domicile	30 Rue St. Jerome Le Bourcat (Gironde)		
Adresse meiner Angehörigen Adresse de ma famille	Madame Georges Pompidou		
Unverwundet - in deutsche Kriegsgefangenschaft geraten - Non blessé - prisonnier de guerre en Allemagne - befinde mich wohl. en bonne santé.			
(Nichtzutreffendes ist zu streichen) (Rayez les indications non conformes)			
Signature			Georges Pompidou

considering the human rights as universal, planetary values - an intent which was gradually confirmed by facts. Its lengthy, complex elaboration (outstanding contributors were Eleanor Roosevelt and the great French jurist René Cassin) managed to draft a test which was indeed universal in its heading but far from unanimous. Of the 58 Countries that where then members of the U.N., 48 approved

Card of the Central Agency for Prisoners of War, 1939-1945, concerning Georges Pompidou.

it, 8 abstained (Saudi Arabia, South African Union, Soviet Union, Byelorussia, Ukraine, Czechoslovakia, Poland, Yugoslavia) 2 were absent (Yemen and Honduras). On the one hand some Islamic countries (many were still colonies or protectorates) accused the text of reflecting values typical of a Western liberal culture, and as such alien to their universe. On the other, the «Socialist» Countries complained for its scarce attention to economic and political rights. In particular Soviet Foreign Minister Vyshinskij, former Public Prosecutor in the trials of the thirties, the years of Stalin's terror, found in that text the premises of future possible interferences in the sphere of the individual states' internal sovereignty».

A well founded worry, considering that in the present time there has been a strengthening, in specific

The first and the last page of the Geneva Convention of August 22, 1864.

PRINCIPLES OF HUMANITARIAN INTERNATIONAL LAW UP TO THE LAST POST-WAR PERIOD.

1856: The Declaration pertaining maritime law abolishes privateering in international relations, governs naval blockades and regulates the presence of neutral wares on enemy ships (and viceversa).

1864: The First Geneva Convention enjoins to gather and care for the wounded and ill soldiers of any nationality, to protect ambulances, military hospitals, medical personnel and material. Since then, and forever, the Red Cross on a white field has become a symbol of neutrality and protection.

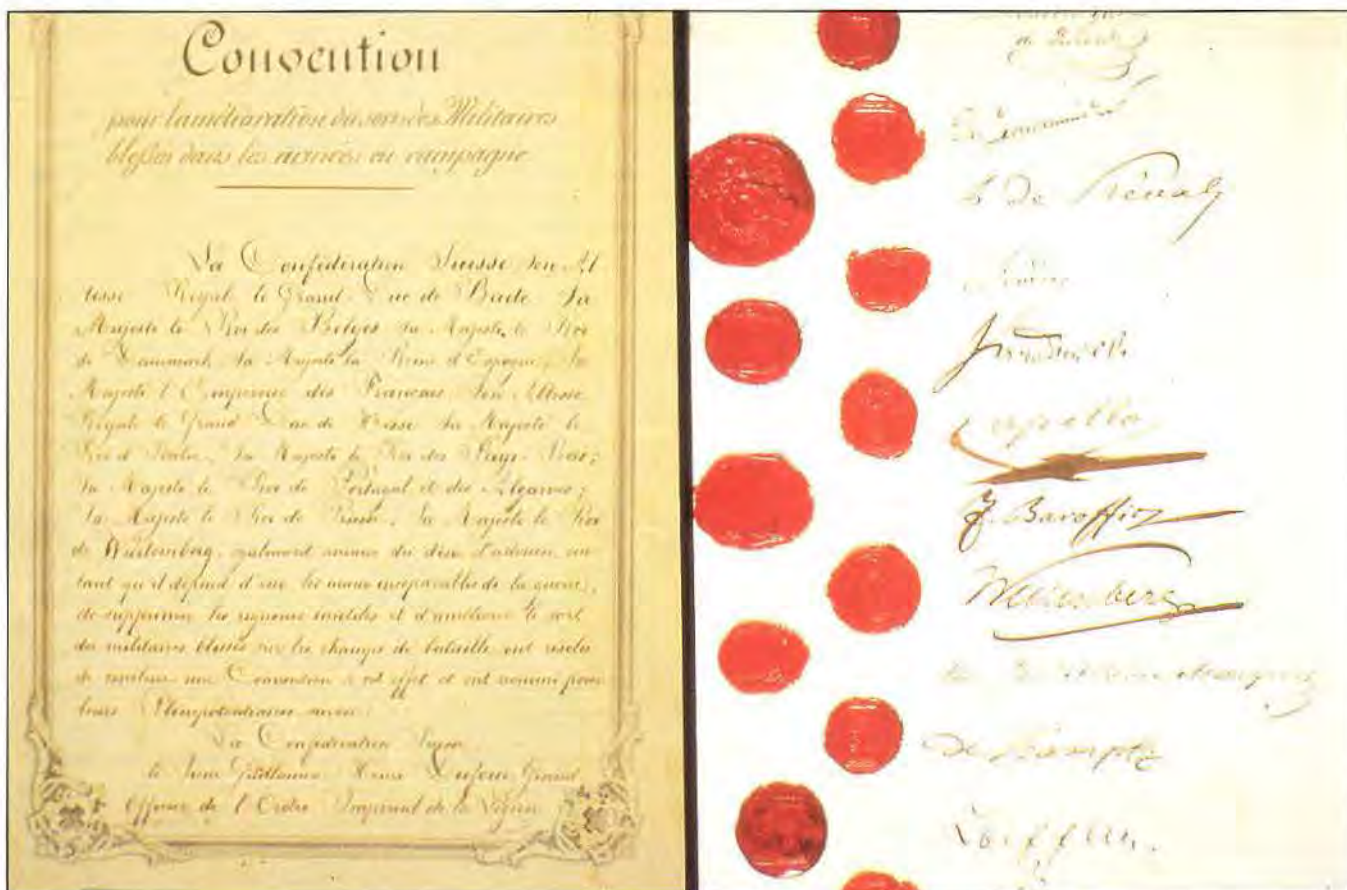
1929: Two more Conventions on the treatment of the prisoners of war, the wounded and the ill.

1948: Convention for the prevention and repression of the crime of genocide.

1949: The four Geneva Conventions reformulate the principles of humanitarian law.

institutions, from the European Council to the Organization on Security and Cooperation in Europe (OSCE), precisely of that «right of interference» which, a few years ago, Mitterrand and Chirac suggested to transform in «duty» to interfere in areas where there are intolerable violations of human rights.

In the light of our European culture, in the 1948 Declaration, Prof. Ungari points out» at least a lack: it does not provide for the suppression of the death penalty. That intention emerges only in the following Convention on Civil and Political Rights, in an additional and facultative Protocol which,

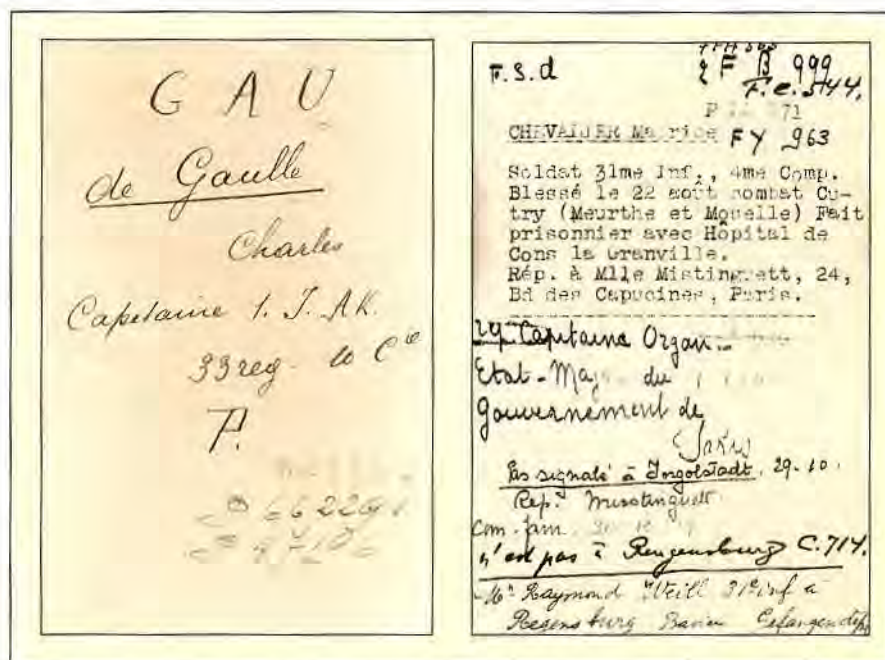


until now, has not been signed by many Countries, including significantly the United States. At present a great campaign, led by Italy, is in progress, and last year, for the first time, a majority has been reached at the UN in Geneva in favour of a plurennial moratorium on executions.

In this lapse of time, hopefully this penalty will be banished by the international community».

The world's progress in human rights includes the international repression of war crimes and/or crimes against mankind. After many decades of frustrations (the idea was vainly sanctioned by the Treaties of Versailles, 1919 and Sèvres, 1920), the Conventions of London and Tokyo respectively gave birth, in 1945/46, to the Courts of Nuremberg, for the German war crimes, and Tokyo for the war crimes in the Pacific. The reservations, Paolo Ungari recalls, claimed that «they concerned trials by victors against defeated, established outside the preconstituted «natural judge» principle, that the sentences could be retroactive for acts not considered crimes when they occurred (or done in obedience to superior orders) and that the procedure was likewise formulated on the moment. Objections to which the Humanitarian Law's body of legislation, clearly preconstituted, supplied the most concrete and correct answer; some, nevertheless, bring up «natural law», giving rise to disputes concerning more precisely the philosophy of law».

Already surfacing in Roman law, the concept of crimes against mankind is sketched out above all in the European common law of modern centuries; the expression «*crimina juris gentium*» identifies crimes considered as such not by the law of a single country or community but by mankind's conscience itself. «More than anything else» the professor considers «it was a very noble idea, cultural or doctrinal, of some jurists. In his treatise «*De jure belli ac pacis*», Alberico Gentili argued with Machiavelli who maintained that in war there are no



Documents of the Central Agency for Prisoners of War, 1914-1918, concerning Charles de Gaulle (left) and Maurice Chevalier (right).

rules («blows are not given through pacts»).

In 1946, the UN Assembly stated that the Nuremberg regulations would be valid as procedure for the future Court. Therefore there are at present both an international Penal Code (the various Conventions, which include the one prohibiting the employment of chemical weapons and that ordering the belligerents to spare the countries' cultural assets) and a code of procedure. The Courts for Yugoslavia (The Hague, 1993) and that for Rwanda (Arusha, 1994) have been set up on that basis; Italy has given an important contribution to both, especially to the first. Moreover, in Rome (next June and July) will be held the Conference for a Permanent International Court, to be instituted shortly, which, satisfying at last the ancient wish of the Peace of Versailles, should start functioning on January 1st, 2000.

Consolidated through the times, the idea that there should be international obligations to respect human rights, during the last decade - Paolo Ungari contends - «has prompted some countries, which have recently freed themselves from

dictatorships, in Latin America and Eastern Europe, to include in their constitutions a clause according to which the international Conventions in general, or at least those regarding human rights, become automatically part of the national laws and prevail over them in case of differences, acquiring therefore almost constitutional importance».

Meanwhile another goal is imminent: to find points of convergence for the many worlds of this smaller and smaller planet. «We» - concludes the professor - «are starting from the Mediterranean, where people converged and diverged». A group of jurists and intellectuals from both shores is engaged in finding common denominators between the European, African and Islamic Declarations, issued respectively in 1950, 1981 and 1990.

The Arab Declaration was adopted in 1994 by the Council of the Arab States' League, but is not yet in force.

□

* Contributor to «La Stampa» and «Prometeo»

OPERATIONAL PLANNING

by Pier Paolo Lunelli *



In order to interconnect the concept of Objective, End State, Centre of Gravity, Decisive Points, Lines of Operation, Sequencing and Contingency Planning, we shall draw a parallel with a chess game whose objective is to checkmate the opponent or compel him to quit (End State, final state/situation). The two kings are the Centres of Gravity: one's own (to be protected) and the opponent's (on which mass, in space and time, must be realized).

After the first skirmishes, each player determines a strategy to checkmate the opponent, and the game can proceed through offensive (against the opponent's Centre of Gravity) or defensive actions (to protect one's own Centre of Gravity). The shift from one to the other takes place generally with the application of Contingency Plans, i.e. pre-planned actions deriving from experience, carried out, for example, if the opponent's queen

threatens to checkmate at the third move, or to connect the transition from a defensive to an offensive action, or viceversa. Each strategy is based on a set of moves, some of which are decisive for the final result (End State) because, for instance, they open breaches in the opposing deployment, bar the king's escape routes, or inflict heavy losses. We shall call these moves «Decisive Points», in that they display the acquisition of an advantage, and



are a favourable precondition for further actions.

We shall call Lines of Operation the whole of these Decisive Points, because it is through them that the mass is applied in space and time, on the road that leads to the opponent's Centre of Gravity (the King) in order to achieve the End State (checkmate). The example at Fig.1 shows the particular case of a checkmate in five moves, executed through Lines of Operation synchronized towards

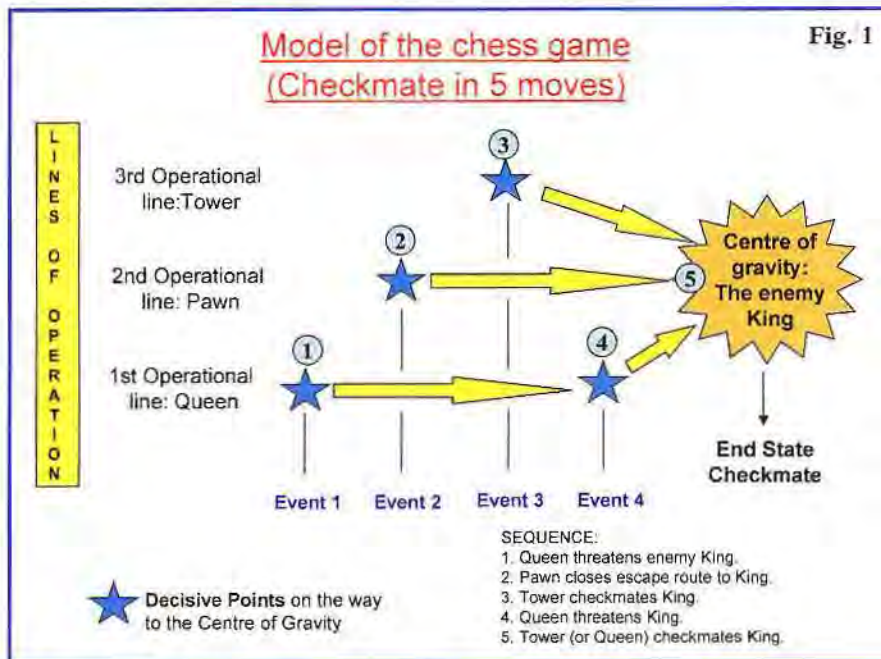
In the second installment we proceed with a comprehensive survey of the basic concepts which are the foundation of the operational-level multinational joint planning, intended as a process which translates strategic aims into tactical actions.

In particular, we expound the operational-planning concepts applicable to symmetric conflicts, such as: Decisive Points, Lines of Operation, Phases, Sequencing, Contingency Planning, Culminating Point. All these, together with the Centre of Gravity and the End State, already examined in the previous article, are called - in NATO jargon - «concepts of Operational Design» and help the operational Commander to prefigure how his campaign will develop, in order to achieve the strategic objectives assigned to him.

Moreover the article illustrates the process of Campaign Planning, or - to put it better - how the combination of the above elements, within the framework of a cognitive-conceptual process, leads to the definition of the Campaign Plan. The next issue will contain the planning variants that must be adopted in case of Peace Support Operations.

The whole of these notions is an integral part of the Battlefield Visualization Concept, which realizes a powerful and efficient integration between the conceptual and managerial capability of the Commanders and the enormous capacity of acquisition and management of information made possible by today's advanced technologies. Some of these concepts refer to the thought of Sun Tsu, Machiavelli and Clausewitz and are already part of the national doctrine of the countries of Anglo-Saxon origin, while in the NATO nations they are still in a draft form. They are currently applied in the planning activity of the ACE Rapid Reaction Corps (ARRC).

The methodology expounded in this article does not contradict the official one. If anything, it adds other points of view, stimulates deeper studies and supplies new approaches to those who are about to tackle a planning problem.



with the employment of scarce forces and without having to «pay» the damages inflicted to the enemy with one's own losses.

(6) The Decisive Points on the road towards the enemy Centre of Gravity are generally of a geographical nature as, for instance, an obligatory maritime line of communication, a hill, a city or an air base. They can also include other elements, such as Command Posts, a portion of air space, a transport or communication junction. The Decisive Points are not the Centre of Gravity, but they are the keys capable of opening its access doors. (7).

A Decisive point is not necessarily a battle which had a positive outcome. It can also consist in eliminating an essential capability of the enemy, or can have an abstract connotation. As a consequence, it does not have necessarily a geographic relevance, since the main consideration is the effect it has on the enemy Centre of Gravity. Likewise, the term «Decisive Point» can be employed also to describe an event necessary to protect one's own Centre of Gravity.

The correct identification of the enemy's Decisive Points is a basic element of Campaign Planning. Although in an operation area there are many Decisive Points that could be neutralized or destroyed, the General Staff tasked with the planning must single out those located on the way towards the enemy Centre of Gravity, while the Commander will choose those he deems appropriate as objectives to control, neutralize or destroy, by employing the «scarce» available resources. The decisive Points are not permanent. As a matter of fact, it could become necessary to review and correct some of them in the conduct phase.

A geographic Decisive Point permitting to gain or keep the initiative, guarantees the Commander the freedom to manoeuvre. This is what permits him to mass on that critical point, in order to achieve surprise and psychological shock. When the

the Centre of Gravity represented by the opposing king:

- movement of the queen;
 - movement of the pawn;
 - movement of the tower.
- Sequencing is as follows:
- queen threatens opposing king;
 - pawn bars king's escape route;
 - tower checkmates king;
 - queen threatens king;
 - queen (or tower) checkmates king (End State).

Still following the parallel, we can say that while the action of the pawn can be considered a «close operation», those of the queen and tower are comparable to two distinct «deep operations». On the contrary, the action of protecting one's own king has all the characteristics of a «rear operation». Deep, close and rear operations take place in bidimensional space (the chessboard) and in time (five sequential moves).

As we shall see later on, **Planning in terms of End State, Centre of Gravity, Decisive Points, Lines of Operation, Sequencing and Phases** presents the advantage of permitting a graphical description by applying techniques deriving from operational simulation, integrated with Gantt (1) and PERT (2) diagrams.

DECISIVE POINTS

«Decisive Points» are the events whose positive result constitutes a prerequisite for eliminating the enemy Centre of Gravity (3).

According to another definition, a **Decisive Point is a point in space and/or time from which the enemy Centre of Gravity can be threatened (4)**. A Decisive Point - according to a third definition (5) - is a generally geographic point which - when conquered or kept - gives the Commander a marked advantage over the enemy. By applying mass, in space and time, on the adversary's vulnerabilities, which contribute to the elimination of his Centre of Gravity, one actually upsets the balance of his instrument, sometimes achieving success even without fighting.

Vulnerability is not only physical, but psychological as well. Sun Tsu and Clausewitz underline the convenience of adopting a line of action that the enemy has not envisaged, suddenly hitting one of his vital points, after having diverted his forces in another direction with a Deception Plan. In substance, by attacking an undefended vital point, one can cause the collapse of the enemy instrument even



The Lines of Operation describe how military force is applied in time and space along the Decisive Points located on the way leading to the enemy Centre of Gravity.

action on a Decisive Point causes the fall of the enemy Centre of Gravity, the result is what Napoleon called «the event», i.e. a shock determining, on the material plane, the disablement of the communication, information and decision net of the enemy instrument and, on the psychological plane, panic and disintegration of the cohesive bonds of the units (8).

During the Arab-Israeli war of 1973, already illustrated in Part 1, Israel attacked on the border between the two Egyptian Armies, not because that was the weakest point (and indeed it was), but with the intent of crossing the Suez Canal and to destroy the enemy

reticular anti-aircraft defence system. In fact, this action would have given its own air forces the possibility to operate in support of the land forces in a less risky environment. In substance, the destruction of the Egyptian anti-aircraft defence system was nothing but the key to open the access to the enemy Centre of Gravity; the result was that the two Egyptian Armies were surrounded, and only the intervention of the two superpowers succeeded in cooling down the conflict.

In the process of identification of the Decisive Points it is necessary **to wear the right hat. Otherwise, the strategic level invades the field of the operational level, and the latter that of the tactical level.**

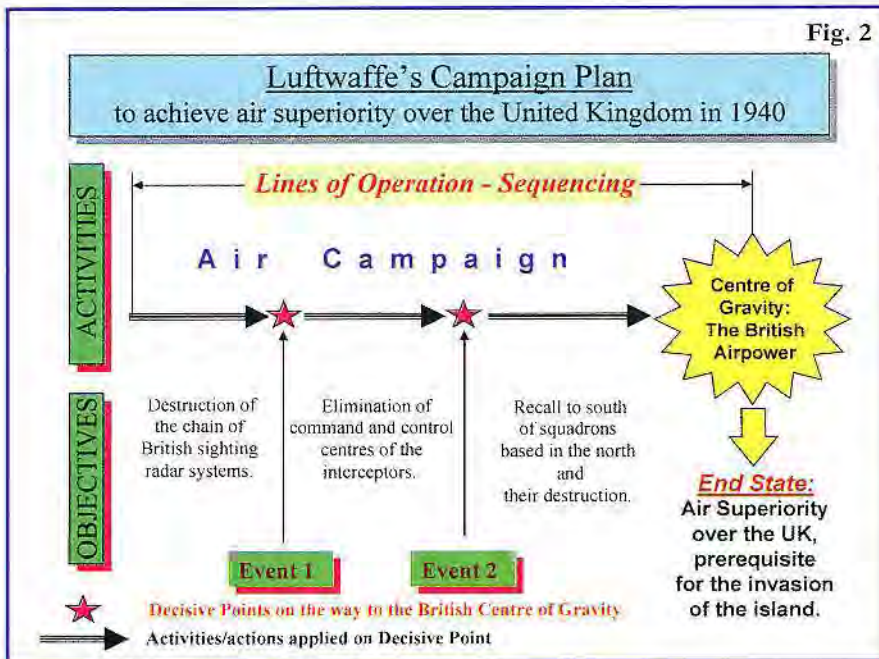
Planning (and even conducting) the battle of the subordinate level - instead of concentrating on

one's own - leads to the certain failure of the whole operation.

A Decisive Point can be also a critical vulnerability. Some vulnerabilities are obvious as, for example, power plants, port and airport infrastructure, supply ships of a task group. At strategic level, critical vulnerabilities could also be the dependence on essential raw materials, the availability of maritime lines of communication, or the dependence on a single source of intelligence in support of decisions.

The best strategy for reaching the enemy Centre of Gravity is the **indirect approach** (9), which envisages to attack weak points and vulnerable objectives. It consists of a series of rapid and synchronized actions (10) which compel the enemy to face unexpected situations and developments, each requiring a

Fig. 2



specific response. In this context, the opponent could face the dilemma of having to respond exposing, at the same time, its vulnerable sides. The whole of these rapid and synchronized actions is defined as «time», which measures the speed and rhythm of a military operation. This is in fact a whole of actions and pauses necessary to mount the successive action, and its control is essential if one wants to keep the initiative. The maintenance of a high «time» requires not only the availability of intelligence, in order to locate the enemy's weak points to be covered with the targeting process, but also an adequate decentralization, in order to allow the subordinate Commanders to exploit the opportunities that could arise. «Time» and decision-making (11) cycle are closely related. In fact, if the enemy's decision-making process is slower, a series of unexpected attacks against his critical vulnerable assets will prevent him from reacting in an appropriate manner.

Lines of Operation

The Lines of Operation describe how military force is

applied in time and space along the Decisive Points located on the way leading to the enemy Centre of Gravity (12).

With a view to this, the Lines of Operation find the relations among the Decisive Points, ascertain their logical progression and interconnect them, creating a critical route in the direction of the enemy Centre of Gravity.

As we said, the approach to this Centre of Gravity can be either direct or indirect (13), but the privileged access is through concurrent Lines of Operation, a concept known as twin-multi track approach. In this way, the enemy Commander reaches a saturation point, in the attempt to respond to multiple Lines of Operation simultaneously applied.

The deception plan is one of them.

According to another definition (14), the Lines of Operation determine the deployment of their own forces in relation to the enemy's.

The Commanders then use these Lines of Operation in order to concentrate their combat power (15), applying it in the three-dimensional space and in time, along a space-time course converging on the enemy Centre of

Gravity. Nevertheless, when the Decisive Points, albeit real, are intangible or immaterial their connection in a Line of Operation is difficult to achieve, as for instance when they lie in the domain of electromagnetics, psychology, ethics or morals. In these situations, as we shall see in the third section of this work, they can be joined with functional and conceptual links rather than with physical ones.

When the Decisive Points are of a physical/geographic nature, a Line of Operation can also be defined in the same terms. This is the case, for example, when one connects the Force from its operational base (where it receives its combat power) to the operational objectives (where it applies its combat power against the enemy). Within this framework, a Force operates through **internal lines** when its Lines of Operation diverge from a central point and enable to modify its gravitation with more rapidity than the enemy's. On the contrary, a Force operates through **external lines** when the Lines of Operation converge on the enemy, which means that these operations require more forces. In both cases, the concept of Line of Operation coincides with that of **manoeuvre through internal and external lines**, known for its application in WWI, both by the Central Empires and the Alliance.

The Lines of Operation relevant to modern conflicts can be extended, as we said, to a multidimensional environment which includes, among others, also electromagnetics, ethics, morals, leadership etc. For this reason, the concept of manoeuvre, still valid at the tactical level, does not seem to be sufficient per se to represent them. In fact, the **End State** is achieved by applying combat power in three-dimension space and in time with a logical process which integrates not only manoeuvre, firepower, deception,

but also command and control warfare, perception operations, psychological operations and special forces, all converging on the enemy Centre of Gravity.

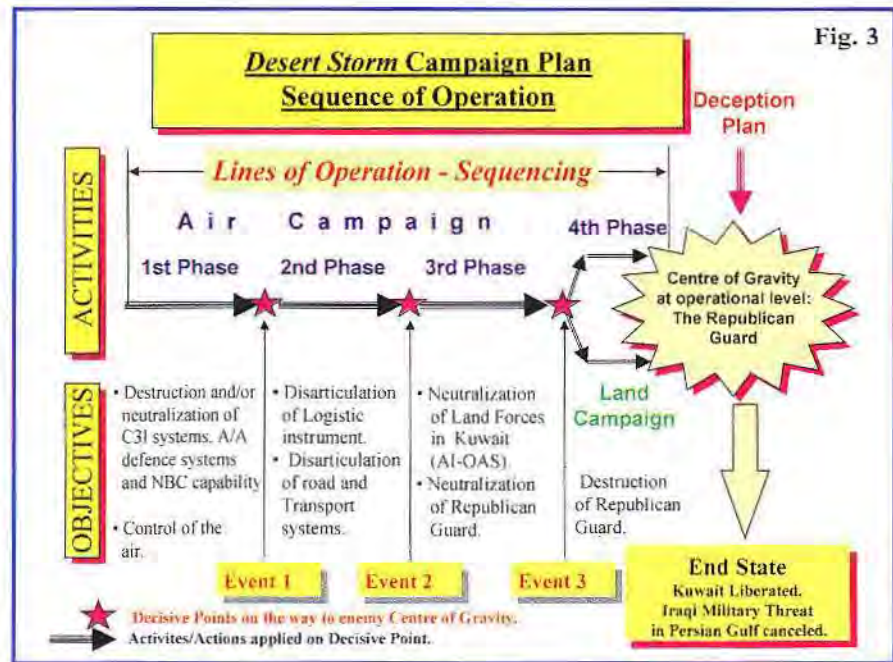
Fig.2 shows the PERT diagram relevant to the Luftwaffe Air Campaign Plan of 1940, where the End State was the acquisition of Air superiority over Britain, as a prerequisite for the successive invasion of the island. Here the Decisive Points are pointed out in a sequence (Events 1 and 2) along a Line of Operation directed towards the enemy Centre of Gravity (Event 3) represented by the British air power. The Counter Offensive Air (COA) activities mark the successive times of the events:

- destruction of the enemy sighting radar chain;
- elimination of the interceptors' command and control centres;
- destruction of the reserve squadrons, stationed in the north of the island and called to the south.

In practice, this plan was not successful, because it was modified during the conduct phase. In fact, some bombing actions of the RAF against Berlin - insignificant also from the tactical point of view - cancelled the logical sequence of events, shifting the German counter-aircraft defence assets to activities of escort of bombing actions on London, an irrelevant objective from the operational point of view. In view of this, the RAF's diverting action on Berlin became a Decisive Point for the British, since it changed in their favour the original German plan.

The Campaign Plan of Operation «Desert Storm», which presents some analogies with the preceding example, is graphically shown at Fig. 3 by a PERT diagram.

The Centre of Gravity at operational level was the Republican Guard, whose destruction permitted to achieve the End State at operational level, namely, the event «Liberation of Kuwait and annulment of the



Iraqi threat to the Gulf countries for the years to come».

In this case, the Lines of Operation envisaged a four-phase air campaign and one land campaign, while the Decisive Points on the route to the Centre of Gravity consisted of three events:

- counter-aircraft activity, combined with the destruction and neutralization of the C3I systems and air defence systems, as well as with the capability of using NBC-capable missile vehicles; air control;
- disruption of the logistic assets and road system, with heavy consequences on transports and supplies;
- neutralization of the Iraqi land forces defending Kuwait and of the Republican Guard stationed in the Basra area.

Finally, the last step in the direction of the Centre of Gravity was taken with an air and a land campaign, both integrated with a Deception Plan. The latter, in particular, envisaged an offensive effort in Kuwait, with a land and an amphibious directrix, while the main effort, based on the 7th Corps, aimed at outflanking the enemy deployment from the west.

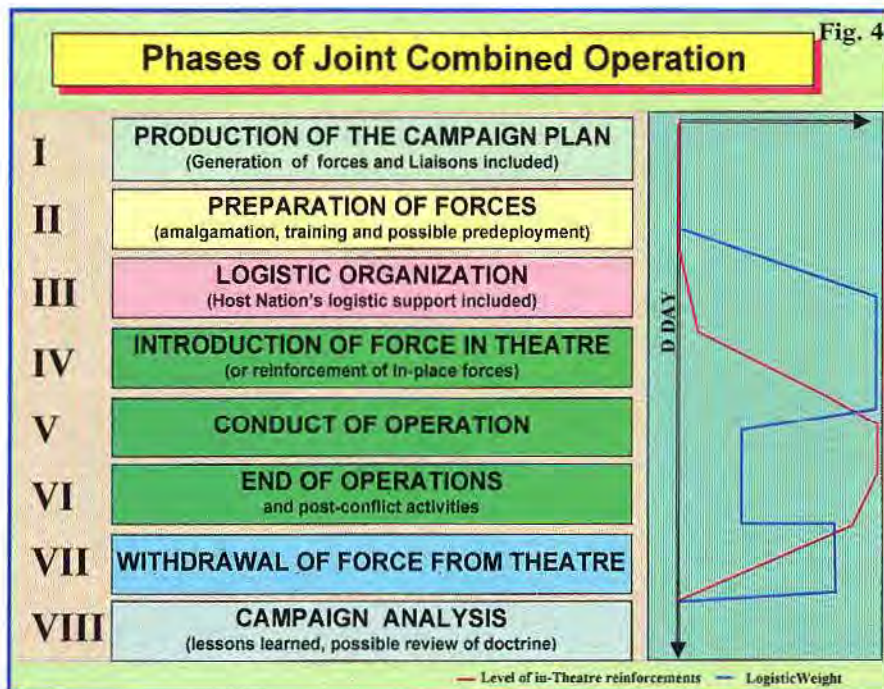
In the conduct phase, an unexpected success in a very short

time changed the sequence of events of the original plan to the point that the amphibious operation - very risky - did not have the significant role envisaged and was conducted with few casualties.

Sequencing - Phasing

The concept of sequencing refers not only to the employment of resources in space and time, but also to the activities they are called to perform in a temporal succession. In substance, it indicates how to allot the resources according to an economic logic, in order to achieve the strategic objective assigned. This concept, which besides is closely connected with those of Lines of Operation, Decisive points, End State and Centre of Gravity, can be found also in the preceding figures.

In a campaign, sequencing is the prefigured arrangement of events, in such a way as to have, a high probability, of eliminating the enemy Centre of Gravity (16). The best sequence of operations to reach the desired End State depends on several factors (17) such as geography, availability of assets for strategic transport, command and control structure,



logistics, public opinion etc. In any case, the sequence selected by the Commander should have enough flexibility to make changes possible throughout the operation.

The sequence of the main operations of a campaign (or the sequence of battles in a main operation) is closely related to the definition of the campaign phases, as decided by the Commander.

A phase defines a period during which the majority of the forces is engaged in a specific activity, such as, for instance the deployment of a multinational contingent.

A typical joint/combined action is structured according to the phases shown at Fig. 4. On the other hand, there can be innumerable variations, in relation to situation and mission.

The graph on the right of the figure shows the level of reinforcements in the Theatre (red) and the weight of the logistic activity (blue) through the various phases. At this point, some considerations appear to be appropriate:

- the phases of joint/combined operations are never distinct and can interpenetrate, in relation to

situation and mission. Their number, furthermore, depends on the assigned mission;

- in case of operations outside the contest of a military Alliance (the so-called «non-art.5» operations, with reference to the North Atlantic Treaty) as, for instance those of Peace Support outside the Alliance area, it is essential to have a **leader Nation**. Operations of the «art.5» type are instead covered by specific Contingency Plans;
- the conceptual and organizational activity leading to the Phase I - Campaign Plan of a multinational operation requires actions at the political level, where the so-called «**market of forces**» takes place. In fact, each Nation is called to contribute in relation to its capabilities and its national interests in the intervention area; the forces' identification process is called «Force Generation / Force Nomination. The availability of **Liaison Teams** at the different levels of operational and tactical command is a key element for correct planning. These teams should not only be able to understand mission, operational concept, doctrine and procedures, but also to provide a timely and

accurate exchange of vital information, besides increasing mutual confidence and respect. In substance, they should not be seen as mere messengers, but be selected with particular care;

- often they require a specific training also in view of the role they must be able to play as negotiators. The Liaison Officers, in fact, represent the point of view of their Commanders and, when possible, should be fully integrated into the Staff to which they are detached. The key areas requiring Liaisons are Intelligence, Logistics, land, air and maritime operations, besides specialized sectors such as Army Aviation, Engineers and Air Defence. Finally, these officers should master the language of the Command where they operate, or be accompanied by an interpreter. The employment of Liaison Teams, furthermore, facilitates the execution of **parallel planning** among the various command levels. This subject will be further discussed in Part 3;
- the **Preparation of Forces (Phase 2)** entails a specific training deriving from the so-called «Mission Essential Task List», i.e. the complex of tasks that the force will be called to perform. For example, in case of the Peace Enforcing operation carried out by the Implementation Force (IFOR) in Bosnia Herzegovina, it was necessary to have not only the capability of conducting defensive and delaying tactical actions, but also that of operating in a second-generation **peacekeeping** environment. Training, which is a specific national responsibility, must be followed by integration with other multinational forces (Force Integration), if possible in areas where they are **stationed** before their employment;
- in multinational joint operations, the Logistic Organization (Phase III) is the key element which conditions all the other phases. In fact the planning Staff must set up the logistic bases, open and



The preparation of the forces entails a specific training deriving from the so-called «Mission Essential Task List», i.e. from the complex of tasks that the force will be called to perform.

maintain the Lines of Communication (LOCs), establish intermediate logistic bases to sustain new phases and the support priorities. A historical example is the operational pause made by Gen. Eisenhower on the Rhine, during WWII, in order to restore the logistic organization. Operation «Overlord», conducted in France, was actually structured into six separate phases, the first and the fifth of which were eminently logistic:

- buildup;
- rehearsal;
- embarkation;
- assault;
- buildup;

- breakout.
- Furthermore, the availability and contribution of a host Nation in the operation Theatre or in its vicinity is also essential, as was proved in the Bosnia operation, in which Italy played a key role.
- the introduction of the Force in the Theatre (Phase IV) is probably the most delicate phase of the operation. As a matter of fact, the orderly and secure inflow is an essential prerequisite for the success of the entire operation. As the old proverb says, «well begun is half done». This subject, together with that relevant to Phases V, VI and VII will be dealt with more exhaustively in the following paragraphs;
 - the analysis of the campaign (Phase VIII) at the end of the operations teaches lessons which are effective if they are

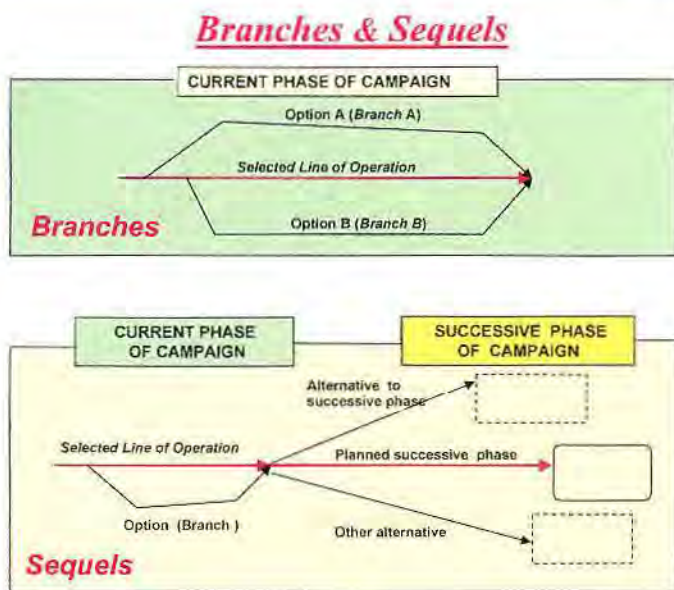
reflected in the doctrine and in the preparation and training of the forces. One must have the courage to point out the errors, without recriminations against those responsible. Otherwise, every further operation will take place as if it were the first, and the remunerative value of experience will be next to zero;

- **the transition from one phase to the next** makes the force vulnerable, because, at this point, both mission and composition/disposition of the forces could change. Therefore, the risk intrinsic in the transition to different phases must be planned using the **instrument of Contingency Planning**.

Contingency Planning

Contingency Planning is a process through which possible

Fig. 5



options are nested in the plan, in order to anticipate opportunities or threats.

This process gives the Commander the flexibility necessary to maintain the initiative because, as Von Moltke reminded his Staff, no plan survives the first contact with the enemy. Thus, the need to envisage options to insert in the plan itself, enabling the Commander to improve his Lines of Operation. These options - of the «if... then...» type - anticipate situations which could modify the basic plan, situations deriving, for example, from enemy actions, availability of resources, meteorologic or seasonal changes. The purpose of a Contingency Plan, therefore, is to anticipate the scrutiny and study of possible events, in order to prefigure the appropriate reactions as early as possible.

The Contingency Planning process must be a continuous one, so that the Commander never finds himself without options, since this allows him to **impose his own rhythm** to the operations. Besides, he must direct the difficult phase of transition between operations

which logically follow one another. For instance, a counteroffensive could be the logical consequence of a defensive action, while a retreat manoeuvre can be followed by a defensive operation. In particular, at operational level these options are applied during the transition to a different phase of the campaign.

In substance, the Contingency Plans, meant as options included in the basic plan, point out «what we should do if event X takes place, or if we win, lose or find ourselves in a stalemate». They are based on one or more assumptions and examine in detail aspects such as:

- priority changes;
- changes in command and control relations as, for example, Transfer of Authority (from one Commander to another), changes in the OPCON (18) or the assignment of a unit under the TACON (19) of another.

Some examples can clarify the concept of «bridge» between basic plan and its possible variants.

After the North Korean offensive, Gen. MacArthur planned and conducted, in September 1950 a

landing on the enemy flanks, at Inchon, although the high tide could make the operation very risky. With this landing, he created a liaison bridge between the defensive operation under way and the offensive one, which was the immediate consequence of that action.

During the «Desert Storm» operation, the 7th Corps produced a set of six Contingency Plans called FRAGPLANS (Fragmentary Plans), an example of anticipation of events and flexibility in planning, in order to keep freedom of action and initiative. In particular, these FRAGPLANS were options that could have emerged during the conduct phase.

On the other hand, the contingency planning instrument should be used «cum grano salis» in the sense that an excessive number of options can create confusion, especially at the lower levels.

Commanders must make sure that their plans contain **options to be implemented** in order to keep freedom of action and maintain the initiative **in case the situation elements, during the conduct phase do not permit to carry out the selected Line of operation.**

Each phase must therefore be carefully examined, asking oneself questions of the «what if» type, with the purpose of giving flexibility to the campaign plan. **The alternative Plans** (or variants to the plan) **within a phase** are called **Branches**, while the **transition Plans from one phase to another** take the name of **Sequels**.

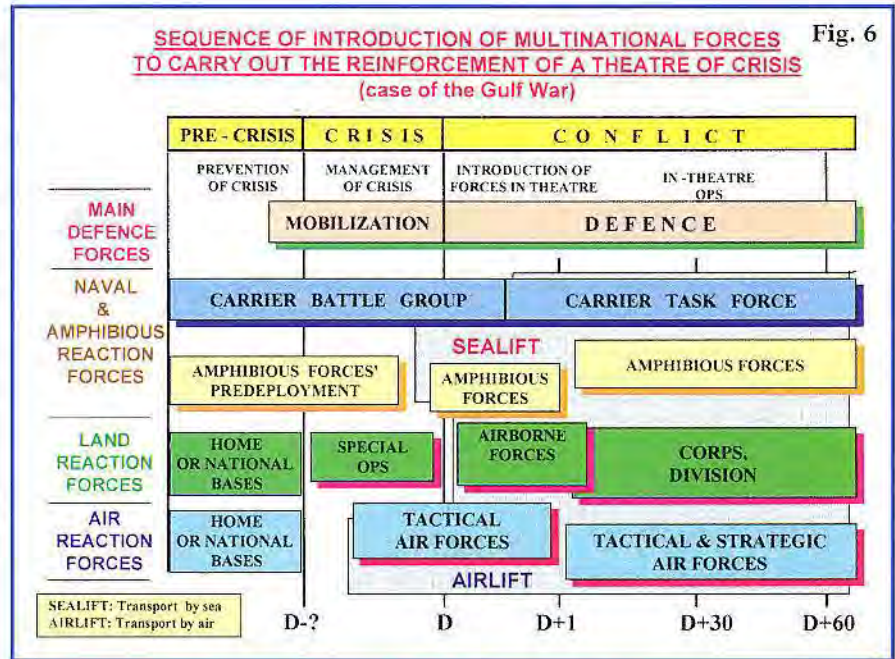
In particular, **Branches** are alternative options/plans applicable to one of the campaign phases discussed in the preceding paragraph. Each of these phases is in fact characterized by a predetermined Line of Operation, of which options A and B shown at Fig. 5 are variants to be implemented in case of need.

Sequels, instead, do not refer to the current phase of the campaign, but **determine the possible options to be carried out in the transition/bridge from the current phase to the successive one**. These options are open, in the sense that, once the most appropriate is selected on the basis of the elements emerged in the conduct phase, it will become the Line of Operation of the subsequent phase of the campaign.

The operations' sequence in the phase of introduction in the Theatre and the exit strategy.

As was mentioned before, these are very delicate phases. The rapid introduction of a contingent in order to reinforce a crisis Theatre requires a careful coordination among forces which must be categorized according to:

- their readiness: Immediate Reaction Forces (IRF); Rapid Reaction Forces (RRF); Augmentation Forces;
- the Service to which they belong: naval, amphibious, land, special and air;
- their nationality, if we deal with a multinational context.



The Reaction Forces, as a whole, should have tactical mobility and firepower, which would enable them to sustain operations for some months, at a distance of approximately 100-150 km from the Sea Ports of Disembarkation (SPODs).

Fig.6 (20) shows the Sequencing of the forces' introduction in the Theatre and the successive phase of conduct of the operations, respectively in the phases of pre-

crisis, crisis and conflict, similar to that carried out in operation «Desert Shield» in 1990. The multinational forces in support to those of the host Nation (Main Defence Forces) are categorized by Service and listed on the axis of the ordinates. The diagram used for graphic representation is a Gantt.

Here we must underline that the scheme outlines only the optimal sequence for the introduction of the forces in the Theatre, and not the sequence of the operations that will be carried out in the same Theatre. The latter could be described with another Gantt (or PERT) specific diagram.

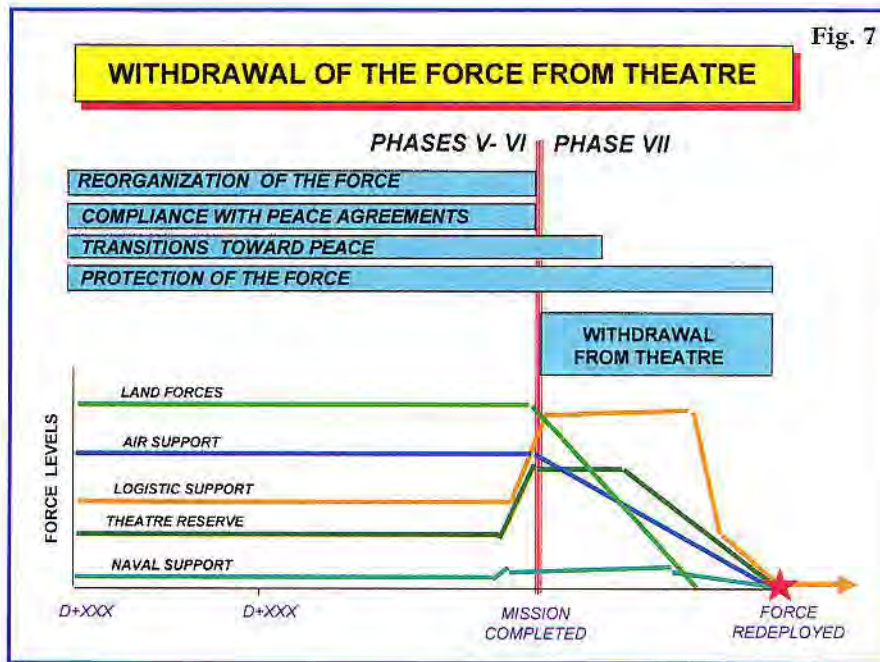
In particular:

- the abscissa axis shows the times, and the D-day corresponds to the arrival of the forces at the Airports of Disembarkation (APODs) and Sea Ports of Disembarkation (SPODs);
- the Main Defence Forces of the allied or friendly nation are



The introduction of the Force in the Theatre is probably the most delicate phase of the operation. As a matter of fact, the orderly and secure inflow is an essential prerequisite for the success of the entire operation.

Fig. 7



latter is to guarantee the protection of the forces in this difficult transition phase implementing, if necessary, a specific Contingency Plan.

Culminating Point

In the present decade, the principles and concepts expressed by Von Clausewitz are at the centre of the attention. As regards defensive operations, he says (21): «*The success of the attack is the result of an existing preponderance... and the material strength runs out little by little. It is possible that, nevertheless, the attacker's preponderance increases, due to a proportionally greater weakening of the defender, but the contrary is true in most cases... The attacker acquires peace tokens of some value for future negotiations, but for this he pays a high price, with part of his forces...*».

Von Clausewitz goes on introducing the **Culminating Point concept**: *there are strategic results which have brought about immediate peace, but these cases are rare; instead, in most cases, a point is reached when the forces available to the attacker are barely sufficient for him to stay on the defensive, waiting for peace... Beyond this point, the situation begins to change completely, and the defender's reaction is to yield space in exchange for the enemy's wear.*

He concludes by stating: «*...Since the attacker's purpose is the possession of the enemy territory, it follows that the advance must continue until the preponderance is exhausted, a rule that pushes the attacker more and more forward, towards his goal, but can easily lead him beyond it... Therefore, the point is to understand what the culminating point of the offensive is...*».

Thus, the concept of Culminating Point applies to both defensive and offensive operations (22). In this respect, an operation reaches its Culminating Point when its results can only be maintained and no further advantages are obtainable. While

- replenished through mobilization;
- **in the pre-crisis and crisis phases**, naval forces, such the Carrier Battle Group can be in international waters in the operation area, and amphibious forces can be predeployed in the vicinity of the Theatre. At the same time, land and air forces carry out preparation activities at home or in the national bases abroad;
- **in the crisis phase**, the employment of special forces could be envisaged (in covert operations), and other units could be given the task of «showing the flag». It is also possible that Command elements of the multinational forces be deployed in order to conduct the planning activity;
- **in the successive phase**, beginning on D-day, a Carrier Task Force, amphibious Units, Corps and Divisions, tactical and strategical air forces could be introduced in the Theatre;
- the light-grey background shows the duration of the introduction phase by sea (SEALIFT) and by air (AIRLIFT) towards the APODs and SPODs. It is not necessary to emphasize that the introduction sequence of the Forces in the Theatre requires a

careful coordination, obtained through a specific agency capable of optimizing the capability of reception in the APODs and SPODs, which are the notorious bottlenecks of the operation. Another important phase is that of the exit from the Theatre at the conclusion of the mission (End State reached) or when the prerequisites for the forces' presence in the Theatre come to an end. A particular case is the emergency withdrawal of a multinational contingent; this should be part of a specific Contingency Plan. The golden rule, in these cases, consists in planning how to leave the Theatre before entering it. The main parameters of the exit phase from an operation Theatre are graphically shown at Fig.7. The post-conflict activities, such as the reorganization of the force, its protection, the transition to peace, connected with those relevant to the exit from the Theatre are represented in blue. Logistic support and employment of the reserve appear to be very important: their performance must increase, because the former has to manage the complex movement system, while the task of the

in the offensive the Culminating Point is the point in space and time where the attacker's combat power does not exceed that of the defender, in the defensive the defender reaches his Culminating Point when he has no more capability to move to the counteroffensive or even to continue his defensive action. In other words, the attacker must cease his offensive and move to the defensive while, on the contrary, the defender is no more in a position to keep his capability of defending himself. This is due to factors such as insufficient logistic support, vulnerability of the LOCs and casualties suffered in the offensive (or defensive).

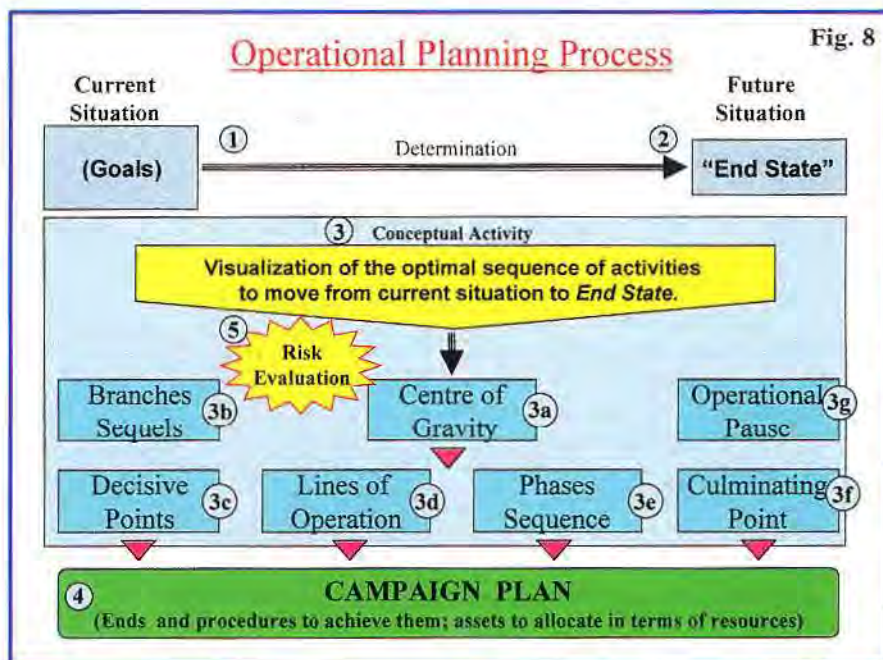
The definition of Culminating Point concludes our discussion of the instruments of operational planning, also called concepts of operational design. In the next paragraph we shall see how they are combined in the preparation of the Campaign Plan.

Campaign Planning

The operational Commander, in its visualization (23) of the battle's space, in order to **prepare the Campaign Plan**:

- develops a clear knowledge of the current situation in relation to enemy and environment;
- fixes the desired **End State** at operational level, represented by the fulfilment of his mission or the achievement of the assigned strategic objectives (aims);
- prefigures the **optimal sequence of activities (modalities)** for employing his forces **from the present situation to the End State**; in substance he connects these elements with a bridge, whose pillars are the instruments of operational planning;
- points out how he intends to apply his military power (assets) in space, time and along the Decisive Points located on the way to the enemy Centre of Gravity.

Campaign Planning includes



first of all a preparation phase, where the existing contingency and mobilization plans are updated and reviewed, in order to adapt them to the new situation. If there are no contingency plans (a negative fact, since it is a sign of poor foresight), the process must be commenced *ex novo*.

Campaign Planning means (24) «to transform the strategic objectives into actions at operational and tactical level» which, in substance, is the application of the Operational Art, mentioned in Part 1. The following examples could clarify the concept of strategic objective.

In the context of the Gulf War (25) the Iraqi strategic objectives could have been:

- to acquire suitable port-accesses to the Persian Gulf waters;
- to control (or master?) the region's oil reserves;
- encourage Saddam Hussein's intention to become the leader of the Arab world.

If this was the national strategy, on the military strategy's plane it was necessary to decide what forces had to be allocated to the project. This decision had to take into account, for instance, the need to protect the borders with

other enemy Nations, Iran among them. At operational level, instead, it was necessary to decide where, when and with what forces the attack against Kuwait had to be launched. The tactical plan does not need explanations.

From the **coalition's** point of view, instead, the **strategic objectives** were:

- restore the lawful government of Kuwait;
- safeguard the oil supply from the Gulf region;
- prevent Saddam Hussein's aspiration to become a predominant figure in the region;
- strengthen the Arab allies;
- preserve the State of Israel.

It is easy to note that the aims were diametrically opposed, and war was inevitable.

The commander at operational level and his Staff employ the just mentioned instruments of operational planning to answer the following questions, structured in four steps (Fig. 8):

- **what military state situation (2) (End State)** should be reached in order to achieve the strategic goals? (1);
- which is the **best sequence of activities/actions (3)** to obtain this state/situation? In other terms, which is the sequence of events

Campaign Planning includes a preparation phase, where the existing contingency and mobilization plans are updated and reviewed in order to adapt them to the new situation.

with the **highest probability** of achieving the End State?

- how can **military power** - in terms of resources available in space and time and in a multidimensional perspective - be applied (4) to produce this sequence of activities/actions? In other words: **what resources, are necessary and how should they be employed to implement the Campaign Plan and achieve the End State?**
- what is the **risk** (5) associated with the use of this **military power**?
- The result of this process is the **Campaign Plan (4)** where the **strategic objective (1)** assigned is connected with the ends, the ways to achieve them, as well as with the resources needed to reach them.
- The operational planning process will be discussed in detail in the third part of this work. Nevertheless, it is deemed appropriate to anticipate the analysis of the four questions, furnishing them with examples from military history.

First Question: How can success at operational level be defined?

What military conditions must be realized to reach to strategic ends/goals? The answer, although evident in theory, is not always so in practice. The definition of End State is perhaps the most complex aspect of the question, as proved by the two following examples.

The North African Campaign (1940-1942) was planned by the Germans in support of Italy, which was having difficulties, to prevent the British from taking control of the Mediterranean. The North African Theatre, anyway, was considered secondary by both the Germans and the British.



Rommel, in the conduct phase, was so successful that he considered conquering Egypt; this decision required the transfer of German troops from other Theatres. The lack of clarity, on the Germans' part, about the definition of success in the North African Theatre had the effect of compromising the strategic goal, as a direct consequence of the drainage of resources from other more important Theatres.

The Allied invasion of Italy in

WWII is another example of scarce clarity of the strategic goals. What was the purpose? To attract the Germans to the south in order to strike on the west, or to conquer Germany from the south?

Second Question: What is the sequence of events that has the highest probability of achieving the End State? This question is very important for two reasons. First, because it is unlikely to reach the strategic goals with only



one operational «move». Second, because it is important that the subordinate Commanders fully understand their mission as well as their role in the higher Commander's plan. In fact, a single tactical action can be irrelevant when not seen in the global context.

In fact, the strategic aim is achieved only through the attack and destruction of the enemy Centre of Gravity. The indirect approach is more desirable, if it

compels the enemy to expose its Centre of Gravity. The example that follows can clarify this concept.

In July 1943 the Germans launched an attack against Kursk Bulge, on which the Soviets had realized a formidable defensive system (action no. 1: prepare yourself), also because they had managed to discover the time and the axes of the attack. With this advantage, they were tempted to conduct a preventive attack, but

they let the Germans carry out their plan (action no. 2: wait). The German attack was effectively contained, (action no. 3: defend in depth) and the battle of Prokorovka took place. Then the Soviets launched a counteroffensive operation (action no. 4: countermancoeuvre and hit the Centre of Gravity) which ended later with the conquest of Berlin. (action no. 5: End State).

In short, the operational Commander must first of all determine the End State (which defines the success of his operation) **and then decide the sequence of the milestones leading to its achievement.**

Third Question: What resources are necessary to carry out the Campaign Plan up to its conclusion? How will they be used?

This step is a logical consequence of the preceding two, and translates into the **operational concept**.

Gen. Schwarzkopf, during the Gulf War, became aware of the fact that the available forces were insufficient for achieving the strategic objectives. He remained firm in his determination to launch «Desert Storm» only after the arrival of the requested reinforcements into the Theatre.

Fourth Question: What is the risk associated with the operation? The concept of risk is particularly important in case of multinational operations since this subject could cause tensions among the Commanders of the contingents provided by the different Nations. The sharing of the risk in equal parts is essential, but is an additional restraint in planning.

Two aspects must be considered. The first one, **risk assessment** (26), is a procedure through which one locates the most dangerous areas, particularly in connection with the protection of the forces. The second aspect, **risk management**, is a process by which the Commander defines the actions to be carried out in order



Campaign Planning means to transform the strategic objectives into actions at operational and tactical level.

to eliminate, reduce or minimize the risk.

For risk assessment and risk management, the Commander and his Staff employ experts in operational research and simulation, generally recruited from the Operational Analysis Branch. These personnel take part with their expertise in the phase of comparison of the Lines of Action, and in support of the Commander's decisions. The risk associated with a line of action, defined on the basic

of parameters suited to the type of activity/operation, is generally expressed with the so-called Risk assessment matrix. The decision about what risk to take is, at any rate, a command activity.

The risk assessment (27) must be made at all command levels, and reported to the higher Commander. This assessment derives from the matrix of one's own and the enemy's strategies, where **risks are assessed in comparison with the advantages**. The politico-strategic level, in particular, must be informed of the potential risks as well as the losses that the force tasked with the mission could suffer (28). At the operational and tactical level, instead, the risk is

managed in different ways. Among these, of particular importance is the «Go/No-Go» criterion, according to which the Commander orders, in the conduct phase, the execution or the annulment of an operation. It is obvious, for instance, that an amphibious operation must be stopped if the landing area is not secure; a mission of attack helicopters must be postponed if the prerequisites on which it was planned do not subsist anymore (i.e. weather-conditions, availability of SEAD, etc.); also, a mission of air interdiction may be cancelled if it is impossible to carry out the pre-planned in-flight refueling.

An excellent application of what we said comes from operation



«Overlord» in Normandy. Gen. Eisenhower, the Commander at operational level, opted for a postponement, considering that the presence of strong wind, low clouds and rough sea in the landing area could jeopardize the success of the operation. The order «Go» was issued only 24 hours later (June 6, 1944) when **the risk associated with the weather conditions could be counterbalanced by the advantage of surprise.** Thus 5,000 ships, 11,000 aircraft and 700,000 men were employed in one of the most significant multinational joint operations.

Here Part 2 ends. The third and last section of this work will deal with

the planning variants concerning Peace Support Operations and examine in detail the operational Planning Process.

(To be continued) □

** Colonel,
Commander, 4th Regt
A/A Artillery*

NOTES

(1) Gantt is the graphic representation of a correlated roll of activities and information, associated with a Gantt bar-diagram, where activities and relevant durations are represented. It permits to introduce and program a list of activities.

(2) **PERT** is the acronym of **Program Evaluation and Review Technique**, used to indicate a method of operational research applied to the study of particularly complex plants or production systems. This method, devised in the U.S. and employed for the first time in the design and construction of the «Polaris» missile (1958), consists essentially in breaking down a given working project into various phases/activities. These are represented in a diagram by blocks connected by oriented segments, representing the possible interconnections among the various phases/activities. Once the time necessary for the completion of the phases/activities is ascertained, it permits to decide their succession in the most appropriate manner, in order to determine the time required to finish the work, and to analyze the critical phases/activities of the project. A PERT diagram is characterized by the so-called critical run. In short, PERT is a reticular diagram where all activities and their interrelations are represented. It permits, furthermore, to produce a detailed schedule in the form of a flow chart.

(3) British Army Doctrine Publication, Vol I Operations Ed. 1994 p 3-13.

(4) Allied Joint Publication AJP-1(A) Ed 1997, p 3.

(5) Field Manual 100-5 Operations Ed. 1994.

(6) C. Jean: Vulnerabilità nei conflitti militari, p 115.

(7) Planning Joint Operations, US Doctrine, p III- 21.

(8) C. Jean: Vulnerabilità nei conflitti militari, p 115.

(9) Liddel Hart, Memoires, Vol II, London Cassel, 1965, from p 162.

(10) US FM 100-1 Definition of «Time».

(11) P. Paolo Lunelli: Information Dominance on the Battlefield, «Rivista Militare», Eng. Ed., no. 1/98 p 80.

(12) British Army Doctrine Publication, Vol I Operations, Ed 1994, p 3-14.

(13) Direct attack is generally of a physical nature. The indirect one, instead, tends to make the enemy Centre of Gravity fall by attacking its sustaining elements. The siege of a castle, for example, could cause its fall for the lack of supplies due to the blockade of the Lines of Communication. On the maritime side, naval blockades have in general this purpose.

(14) Allied Joint Publication AJP-1 (A) Ed. 1997, p 3-2

(15) Two definitions of combat power: (1). The whole of lethal and non-lethal assets that a unit can apply against the enemy in a given time. It is the expression of a potential capability-(2). The whole of the combat functions of a unit or formation (command capability, manoeuvre, fire, protection, intelligence and logistic support).

(16) British Army Doctrine Publication, Vol I Operations, Ed 1994, p 3-15.

(17) Field Manual 100-5 Operations, p 6-9.

(18) Operational Control (OPCON).

(19) Tactical Control (TACON).

(20) Fundamental of Planning, US Naval War College, 1991, various authors.

(21) Karl Von Clausewitz: On War, from p 704.

(22) JP3 Doctrine for Joint Operations (US) p 2-22.

(23) P. Paolo Lunelli: Information Dominance on the Battlefield, «Rivista Militare», Eng. Ed., no. 1/98 p 80.

(24) Arsh Irwin: The Levels of War, Operational Art and Campaign Planning, Strategic Combat Institute, 1993.

(25) Arsh Irwin: The Levels of War, Operational Art and Campaign Planning, Strategic Combat Institute, 1993.

(26) Command and Staff Decision Processes, Fort Leavenworth, Kansas, February 1995,

(27) For more information, see C. Jean: Vulnerability in Military Conflicts.

(28) Naval Warfare Publication, March 1, 1995.

Arm

We are now at the last appointment of this series. It should be a moment for conclusive remarks, in order to give a state-of-the-art account of a difficult process of structural and operational reorganization of the Service.

In this installment we present the following articles:

- «Capability Packages» and «Training and Schools» by Brig. Gen. Ivan Felice Resce and Lt. Col. Sabato Errico.

The work discusses the possible evolution of the training/schools organization, an essential component in support of the operational instrument.

The whole activity aims at achieving a synergy of efforts which, within the system, should make possible the logic interconnection of employment procedures, doctrine and formative capabilities.

- «Planning: Year One», by Brig. Gen. Ivan Felice Resce

The article describes the objectives of the planning process: to prepare, in the medium term, at least at division, in order to give an efficient contribution to European security; establish manoeuvre forces

characterized by flexibility, leadership, strong internal cohesion, integrability within the operational systems which constitute the task force; to improve the efficiency of the Reconnaissance units, the Artillery and the Engineer Corps; to strengthen the adherence logistics.

- «Capability Packages. Logistics», by Lt. Col. Sauro Baistrocchi.

The study describes the actions taken in order to adapt logistics to the changed geostrategic conditions. The «Reference Logistic Concept» is the theoretical prerequisite for change. Its basic idea is to change the gravitation of the support assets, no more anchored to the national territory and to a well defined threat, but dynamically reshaped, in mentality and capabilities, for projecting and sustaining the units in operations outside the borders.

- «Evolutionary Trends of the Capability Packages. Post-2010 Scenarios of Employment» by Lt. Col. Sauro Baistrocchi.

The work envisages certain post-2010 scenarios, and outlines some possible lines of investigation for the development of the national land-forces.

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CAPABILITY PACKAGES

TRAINING AND SCHOOLS

by Ivan Felice Resce* and Sabato Errico**



The Italian Army, aware of the role it must take on in the modern operational scenarios, has begun a new system of force planning, marking the transition from an approach based on threat to one centred on capabilities. The concrete expression of this type of planning is the «Capability Packages» project, born with the intent of reshaping the Army on the basis of the emerging operational requirements. In particular, the Project aims at letting all the available resources flow synergically together towards objectives corresponding to specific, concrete, coherent and interconnectable capabilities (partial objectives), thus realizing, an short-, medium- and long-term horizons, the complete project of the Service, progressively but through finished partial systems, operationally employable in every phase of development of the programme.

Within the general project, a specific study was devoted to the school/training sector, an essential support-component of the operational instrument. The basic concept of the study is precisely that of backing up the Service's general objectives as regards the preparation of the capabilities required for each package of forces.

For study purposes, the capabilities can be assembled in macroareas (Fig.1) with the objective of finding the common formative courses and creating the basis for their close integration, both in the preparation phase and in actual employment.

The scheme also shows the existing interactions between the various functions, as well as the preeminence of the «Combat» function.

The scheme, examined from the school/training point of view, suggests, at least conceptually, the possibility/appropriateness

of assembling in a few «centres» the formative capabilities directed towards the operational functions requiring a marked integration.

This measure, among other things, would facilitate the coordination of the whole sector which, in any case, should operate with singleness of intent and total sharing of knowledge, resources and experiences.

It's hardly the case to underline

that the concept must be developed with realism and concreteness, without losing sight of the context and of the restraints imposed by the existing structure.

As we mentioned, each operational capability results from the product of several factors which, in their turn, derive from the combination of a number of parameters (Fig.2). The latter, practically stable during the cold war, today

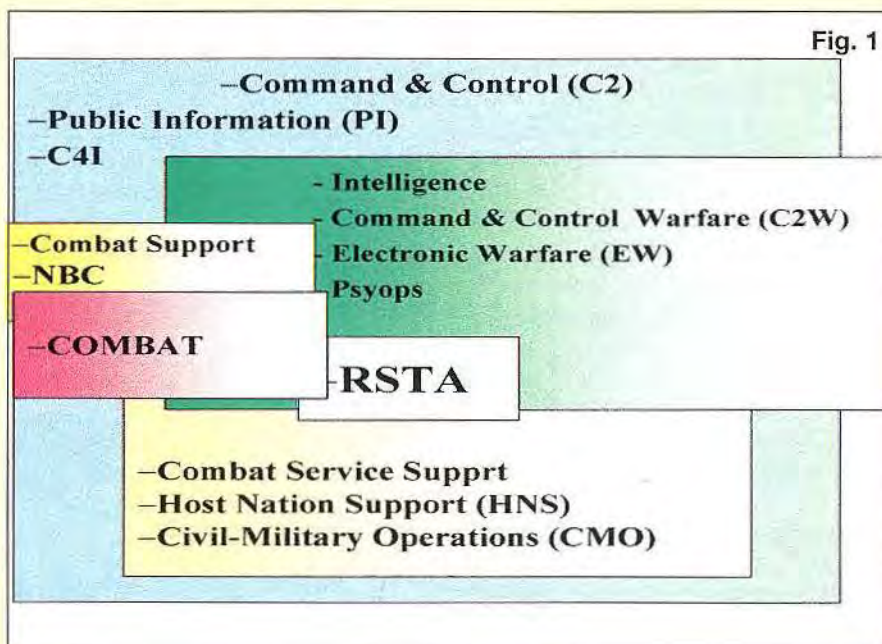


Fig. 2

FACTORS	PARAMETERS
HUMAN RESOURCES (Commanders and Troops)	Motivation Leadership Techno-professional preparation Psycho-physical characteristics Experience
EQUIPMENT (Arms, vehicles, ammunition)	Technological Level "Combat Service Support" function
EMPLOYMENT PROCEDURES (Tactical and logistic doctrine)	General Concepts Doctrine of employment Forces' organization Employment procedures down to lowest levels.

assume a dynamic character, in relation to the constant evolution of scenarios, employment contexts, socioeconomic development and international relations.

The dynamism that marks the evolution of the factors and the relevant parameters is graphically represented at Fig.3.

The chart exemplifies a concept: in order to keep the operational capability up to standards updated and adequate to the employment scenarios, it is necessary to realize a synergy of efforts involving the whole structure of the Service.

In substance, it is a matter of organizing a «system» permitting a logical connection within the «hierarchy entrusted with the development of concepts, doctrine, employment procedures and formative capabilities (Fig.4).

In short, those who develop formative capabilities for a specific function, must be able to find counterparts, at the higher levels, that are expert and well informed also because they can, and must, be in contact with the corresponding operators of the allied Nations and international organizations.

THE FORMATIVE/TRAINING FUNCTION

Training is therefore an incremental factor of the operational capability. **Training**, in its widest meaning, includes:

- **training of personnel (Cadres and Troops);**
- **training of Commands and Units.**

The binomial «schools-training» is one of the primary aspects of the forces' generation process (Fig.5).

The whole sector must therefore be in line with the **operational objectives outlined by the Service in order to effectively carry out the assigned missions.**

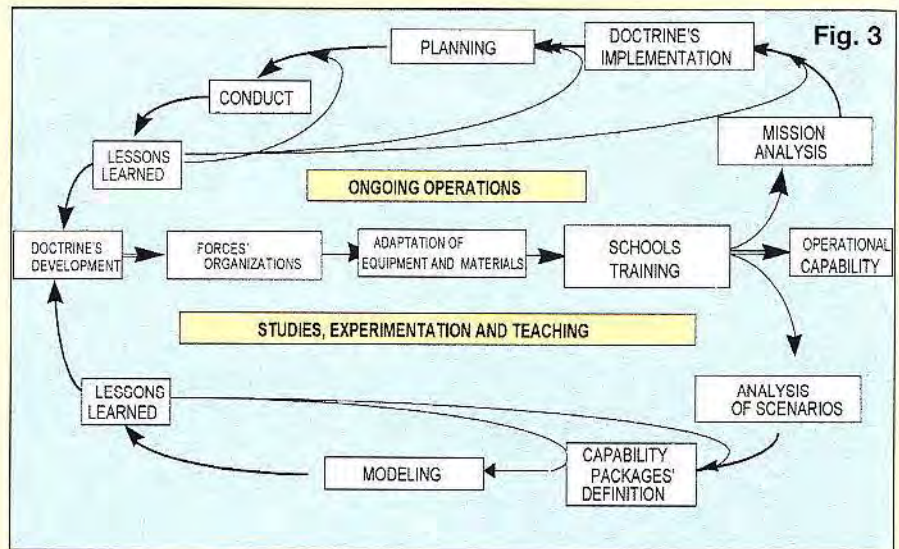


Fig. 3

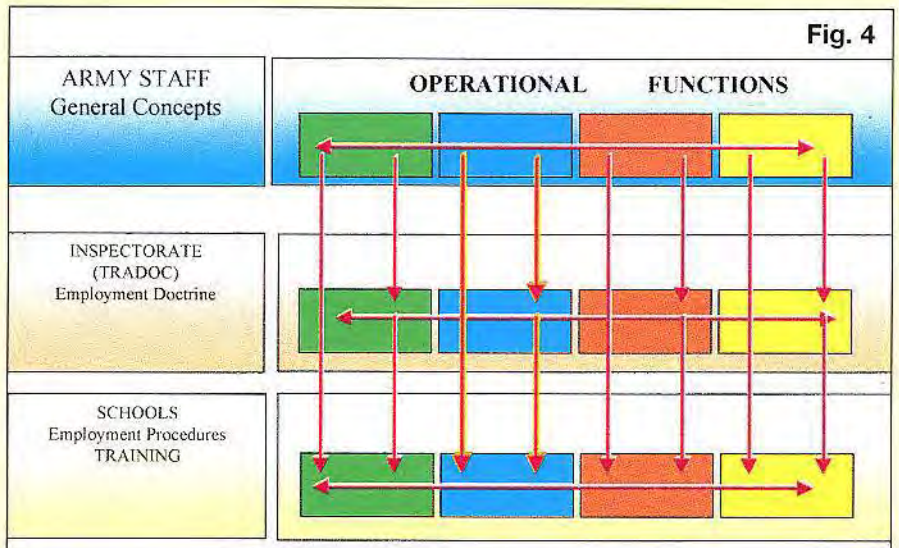


Fig. 4

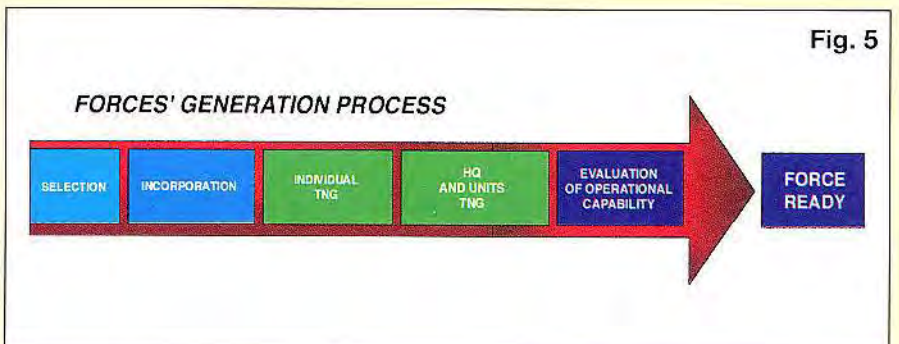


Fig. 5

SITUATION OUTLINE INCIDENCE ON TRAINING

The missions assigned to the Armed Forces give rise to employment options that differ in relation to:

- **type of operation:** from war operations to humanitarian aid;
- **context:** single Service, joint, multinational;
- **theatre:** national, NATO, out-of-area.

In this perspective, the engagement in war operations outside the national-territory, as well as in joint and multinational contexts, is the most onerous, also from the point of formation and training viewpoints.

It is common belief that a soldier prepared and equipped for war operations is perfectly capable of performing in any operational engagement.

This is certainly true as regards the basic technique of individual combat-training, employment of weapons and systems, survival etc.

Nevertheless, it should be noted that each option of employment requires specific operational capabilities, characterized by different means, systems and equipment. This is precisely the reason why the forces have been divided into Projection, Reaction and Presence/Surveillance forces.

As a consequence, also **the training of personnel, Commands and Units must be developed in accordance with the role attributed to the forces.**

With reference to the latter aspect, suffice it to think that in war operations a soldier must exploit to the utmost the lethality of the systems at his disposal, in order to overpower the enemy, while in a peacekeeping operation the use of force is limited to the cases envisaged by the Rules of Engagement (ROE), where there is no other way of obtaining the respect of the mandate.

In substance, the role of the soldier in war operations is to legitimately exert violence, in order to achieve the objective assigned, while in peacekeeping operations his role is to control the violence between the opposing factions, using only the minimal force necessary and only in the cases envisaged by the RoE.

Furthermore, more than the joint context, the multinational

context in which modern operations are carried out requires a specific preparation of both the staff organizations included in multinational Command and Control structures (CJTF Hq) and the units - down to the lowest levels - that could be called to conduct combined actions.

It is hardly the case to point out that the first step of interoperability is the adoption of common techniques and procedures.

Also the information sector deserves some considerations, as regards the employment of the sources as well as the use of the elements of information.

As far as the sources are concerned, IMINT (Imagery Intelligence) is certainly the sector where the greatest progress has been made, thanks to the developments of advanced technologies, both in the field of satellite-reconnaissance and in that of sensors installed on manned or unmanned aircraft.

This is a source of great value in symmetric conflicts, and it

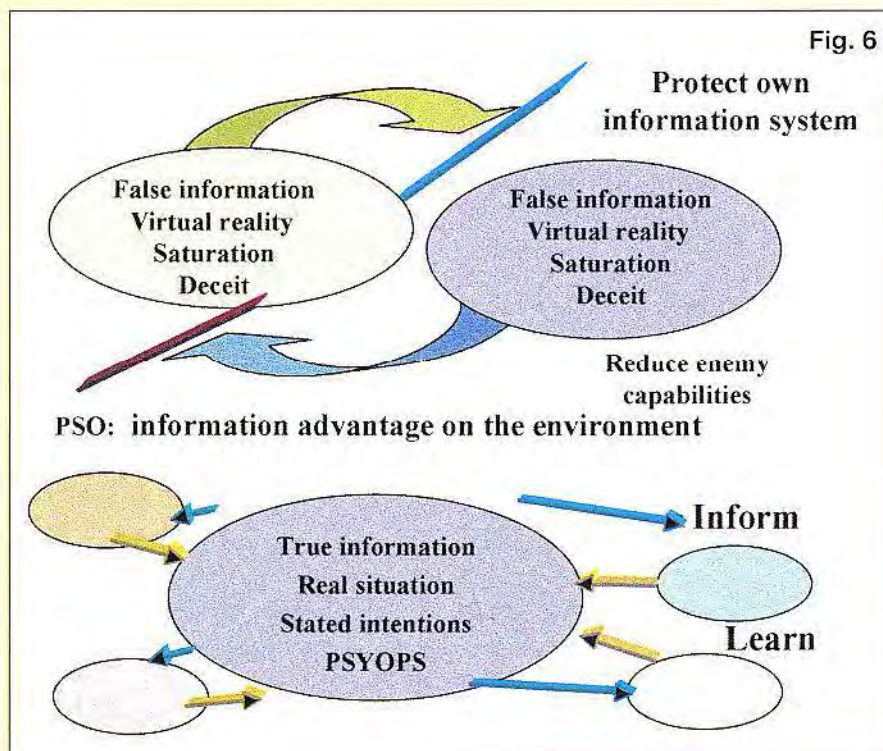
can contribute to the transparency of the theatre. On the other hand, it may be insufficient in peacekeeping operations, considering the objective difficulty in distinguishing equipment and personnel employed by the factions for war purposes from those employed for civilian or humanitarian use.

In this scenario, HUMINT (Human Intelligence) certainly continues to be an indispensable source of information.

As regards the information issue, it must be stressed that in any case the superiority in the sector of information is one of the main factors of success. Nevertheless, the approach and even the use of information assume completely different characteristics, as shown at Fig.6.

In war operations deceit is very important while, in PSOs, transparency is indispensable, not only for the contingent's credibility, but also for deterrence.

The situation picture is also characterized by other innovative elements, which



impose adaptations and adjustments to the formative and training systems, such as: evolution of the Command and Control systems, institution of the Marshals, Sergeants and Volunteers rolls, increase of the volunteer component, reduction of the conscription time, international tendency (NATO TRAINING GROUP; FINABEL) to concentrate certain formative activities in a single nation, in order to achieve interoperability and save resources.

REPERCUSSIONS ON SCHOOLS AND TRAINING

A fundamental consideration is obvious but nevertheless necessary: to prepare the instruments for the new missions is much more difficult, complex and expensive than it was the defence on the north-east of the Peninsula.

The new reality imposed, in the first place, **a radical revision of the formative course:** the preparation of the personnel must necessarily assume a **permanent character and be employment-oriented.**

In fact, the complexity and diversification of the functions to be performed, require continuous formative courses, consisting of moment of specific preparation devoted to **know-how to**, which precede the undertaking of a particular task.

Furthermore, the **multinational nature** of the contingents employed in modern operations necessitates a preparation centred on techniques and employment procedures agreed upon in advance, and shared among the possible partners. It is a question of **internationalizing the formative and training process**, solving beforehand also the problems connected with the **knowledge of languages.**

An essential characteristic to be conferred to Commands and units is that of **projectability**, both on the national territory and outside. This presupposes, on the formative plane, specific skills in the field of planning, multimodal movement, assumption of deployments, logistic support etc.

Moreover, the peculiarity of the conduct of peace support operations requires the availability of **areas, instructing skills and training systems committed to PSOs** (Peace Support Operations).

Finally, the value of the HUMINT source for the informative activity in PSOs, requires that the personnel designated for service in this delicate branch have a goal knowledge of the so-called rare languages, with particular reference to the languages used in the areas of most probable employment.

In short, the permanent training centred on «know-how», the internationalization of schooling and training, the increase in the projection capabilities of Commands and units, the establishment of PSO centres, the knowledge of «rare languages», specially for intelligence personnel, are primary requirements in the school and training sectors.

Finally, the new professional figures, such as the regular volunteers, envision an annual training diversification for minor units, as well as the retraining of volunteers in relation to age, transition to other roles, attribution of new functions (i.e. instructor).

The development of these capabilities involves high costs in terms of human and financial resources.

These resources must necessarily be recovered through the rationalization of the existent, and **certainly not by taking them away from the operational component.**

THE POSSIBLE COURSES

To orient the school/training component toward the acquisition of new capabilities is a very difficult challenge, which necessitates remarkable mental and cultural adaptations.

This is not due to lack of ideas, but to the objective difficulties due to the time needed for establishing the basic, especially cultural, conditions, for introducing changes. There are also restraints which have different origins (infrastructural, social, emotional, etc.) and can be overcome only by everybody's sharing the need for change and by everybody's will to pursue the objective.

There are essentially two main directions that can be followed. They are:

- rationalization and optimization, according to the operational functions (combat, RSTA, combat support, combat service support, etc.);
- adjustment of the internal organization to the capabilities to be expressed by the Schools (Fig. 7).

For what concerns rationalization and optimization, the objective is to have the school/training area acquire an organizational structure in line

Fig. 7

THE SCHOOL COMPONENT'S CAPABILITIES

Exercise Command & Control

Carry-out studies

Teach

Experiment

Support

Assure operation

with the operational functions, realizing, at the same time, all possible mergers in order to save resources.

Considering the limitations connected with the present location of the infrastructure, this adaptation requires the adoption of measures spaced in time and therefore, short, medium and long-term objectives should be fixed.

As regards adjustment of the internal organization, the first objective is to adapt the structure to the basic capabilities of the areas of command and control, teaching, study/experimentation and logistic-administrative support. The second aim is that of achieving a close connection between teaching, lesson learned and future developments, adopting the «learning laboratory» concept, i.e. integrating some common formative experiences.

It is also necessary to proceed to internationalize certain training activities, in order to attain interoperability and economy of resources.

Organization of the command and control system

The command and control structure of the school/training organization has been recently readjusted (Fig. 8). In particular, the training sector has been placed under the responsibility of the **Inspector of Army Schools**, who avails himself of:

- a Deputy Inspector for Officers training, who is also Commandant of the War College;
- a Deputy Inspector for NCOs and Volunteers training, who is also Commandant of the NCO School.

Also the Service/Branch school sector, like the training one, has been placed under the responsibility of a sole supervisor; the **Inspector for Army Branches**, who avails himself of:

- an Army Branch Inspectorate - established with the concurrence of the previous five Service Inspectors - with general responsibilities concerning training, regulations and inspections;
- five Deputy Inspectors, one for each Branch, who are also Commandants of the respective Branch Schools (Infantry, Cavalry/Armour, Artillery, Engineers, Communications).

As far as the Logistic Schools are concerned, they have been placed under the responsibility of the Army Logistic Inspector, who avails himself of three Deputy Inspectors (Transport/Materials, Medical/Veterinary, Administration/Commissary).

Organization of Schools and Institutes

The situation of Schools and Institutes is shown at Fig. 9.

As regards personnel, the training sector «absorbs» 11% of officers, 8% of NCOs and 10% of Troops, with reference to the established strength.

In relation to the new organization of the Inspectorates and Command line, the organizations in charge of training can be classified according to the fundamental functions listed at Fig. 10.

CAPABILITIES OF THE SCHOOL/TRAINING AREA

The tasks of the school/training organization essentially concern

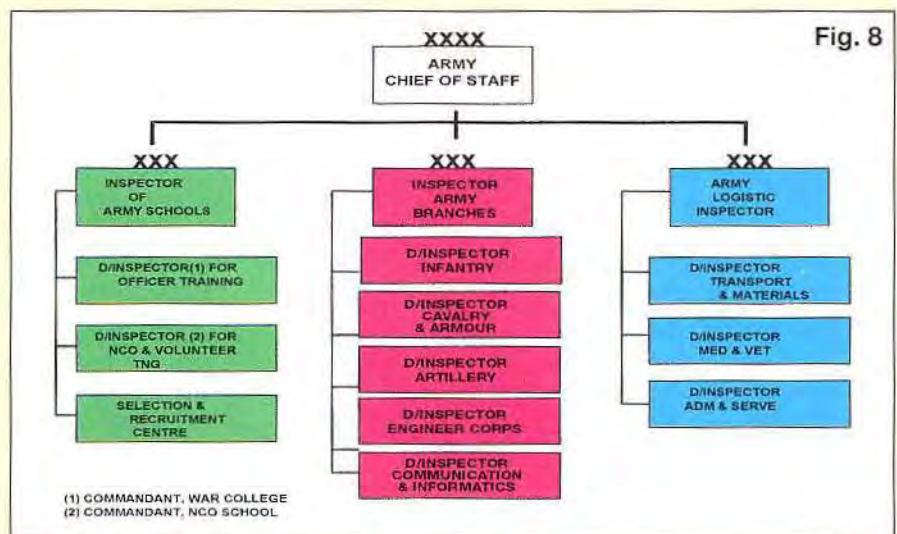


Fig. 9

INSTITUTES AND SCHOOLS	BRANCH /SPECIALITY SCHOOLS	LOGISTIC SCHOOLS	OTHER SCHOOLS / ORGS
SCHOOL INSP	BRANCH INSP	LOG INSP	
Nunziatella (2) Military School Military Academy Application School War College Army NCO School +5 Vol. Tng. Centres Army Foreign Languages School	Infantry School Cavalry School Armour School Artillery School A/A Artillery Tng. & Exp. Centre Engineer School Communications School Joint NBC - Defence School Joint Telecommunication School	Transport & Materials School Adm. & Serv. Military School Mil. Medical School Professional Medic NCO School Veterinary Military Centre	Alpine Tng Centre (Alpine Troop Command) Geodesy, Topography, Cartography School (Mil. Geog. Inst.) Paratroop Mil. School (Folgore Brigade) Army Aviation Centre (Light Avn. Command) n° 20 Conscript Tng. Centres (Mil. Reg. Commands)

four **very broad functions**:

- **teaching**;
- **study**;
- **experimentation**
- **logistic-administrative support of activities.**

In order to carry out the tasks connected with these functions, the school/training structure must have a Command and Control system capable of directing and coordinating the activity of all sector (training, logistics, administration, infrastructure, security etc.).

In substance, to give a capability to a sector does not mean only to organize it in terms of human resources and equipment, but also to create specific capabilities and make them productive, playing a decisive role within both the school structure (organization of seminars, meetings, working groups, activation of «lesson learned» cycles) and outside it (continuous osmosis with the central Organizations and with the Units).

With a view to this, the capabilities necessary for the function can be grouped into five categories (Fig. 11):

- **command and control**, concerning the functions of the Commandant, Deputy Commandant and Commandants/Directors of Courses;
- **teaching**, concerning the «classic» functions of Institutes and Schools, i.e. training, specialization, qualification, professionalization and updating, as well as meeting joint and international requirements. (Teaching Area);
- **study and experimentation**, concerning the tasks assigned to the Schools as depositaries of the Branch/Speciality «culture», tasks aimed at working out employment procedures and techno-tactical regulations for the Branch/Speciality, as well as experimenting the employment

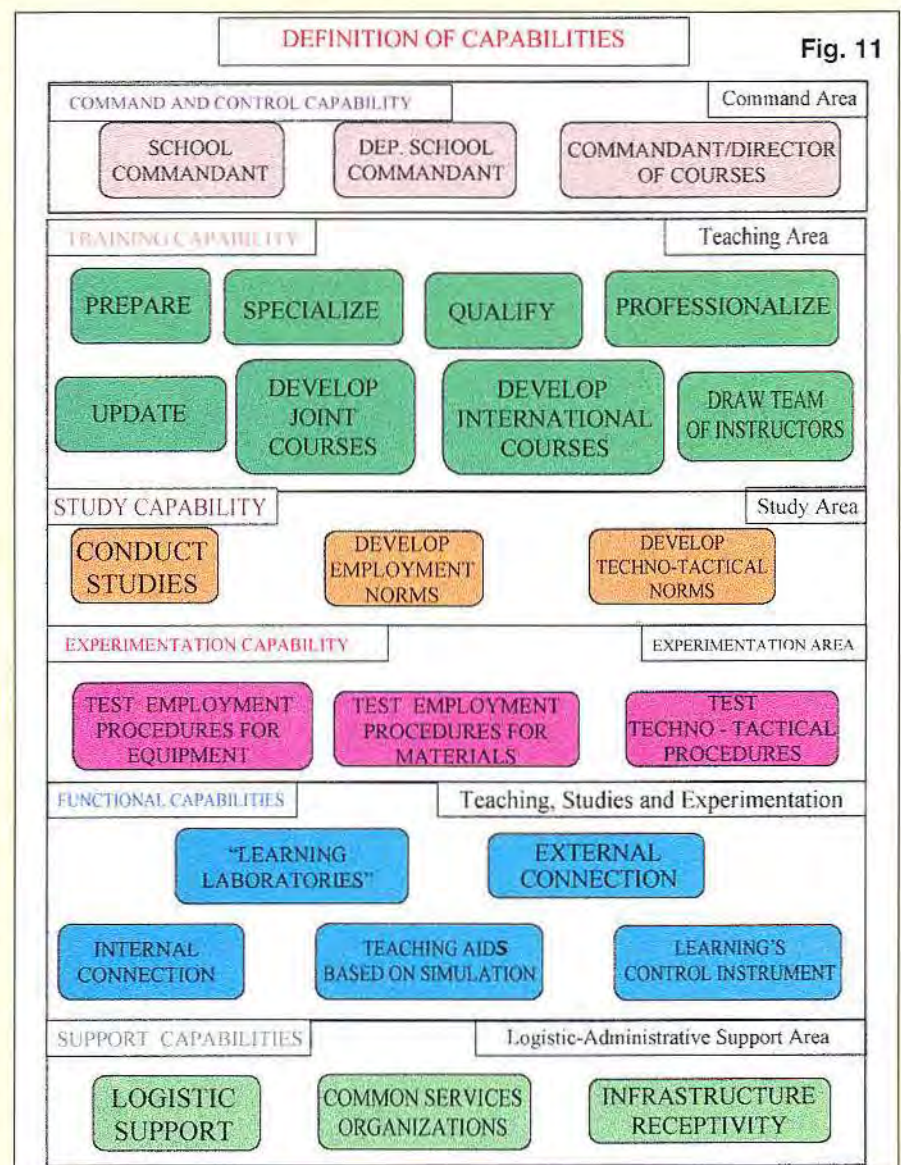
of equipment, materials and weapon systems (**Study and Experimentation Area**);

- **functional capabilities**, concerning the type and quality of the available didactic

instruments, training methods and links that Institutes and School must have, both external (international connections) and internal (close contacts with Army General Staff, Inspectorates

FUNCTION	ORGANIZATIONS
Conceptual	Army Staff and Inspectorates
Organizational	Land Forces Command and Intermediate Operational Commands; Commands of Schools and Institutes.
Executive	Schools and Institutes, Brigade Hqs, Regiment Hqs. (or equivalent Units).

Fig. 10



and Units) (Teaching, Study and Experimentation Areas);

- **support**, regarding infrastructure (quarters, classrooms, gyms and sports grounds, ranges and training areas, parking lots) as well as the logistic support connected with the post's general services (Logistic-Administrative Support-Area).

Possible development of the school/training organization in relation with the operational functions

The school/training organization must carry out a function of support in favour of the operational organization, which is the productive structure. Within this framework, it develops its capabilities in several sectors: **Command and Control, teaching, study, experimentation, logistic-administrative support.**

The primary capability is certainly that of teaching, which consists of training, qualification, specialization and professionalization. Each of these activities concerns one or more categories of personnel, and, in the same manner, leads to the division of Schools and Institutes into two very large areas: **training centres**, subdivided by categories of personnel, and **qualification/specialization centres**, which are multicategory institutes aimed at preparing students on the basis of the «operational functions» described in the «Capability Packages Study».

Consequently, the school/training component must be **proportionally and functionally** structured according to the capabilities to be developed at the various levels, i.e. summit, departments corresponding the operational functions, training poles whose primary responsibility is the conduct of training (Fig.12). In practice, it must have a very simple structure that permits an harmonious development of the

component's capabilities and guarantee an orderly coordination of all activities.

The road is neither short nor easy. There are nevertheless margins that enable us to start adjustments that should lead the structure to converge towards a configuration that could be called a **long-term prospect.**

Within this framework, and taking into account that the organization should be adapted not only to the operational functions but also to the new formative requirements, which impose further adjustments, a first step towards the attainment of the objective is outlined below.

Adaptation and increase of the capabilities

As is the case with the «Capability Packages», also the partial project relative to the

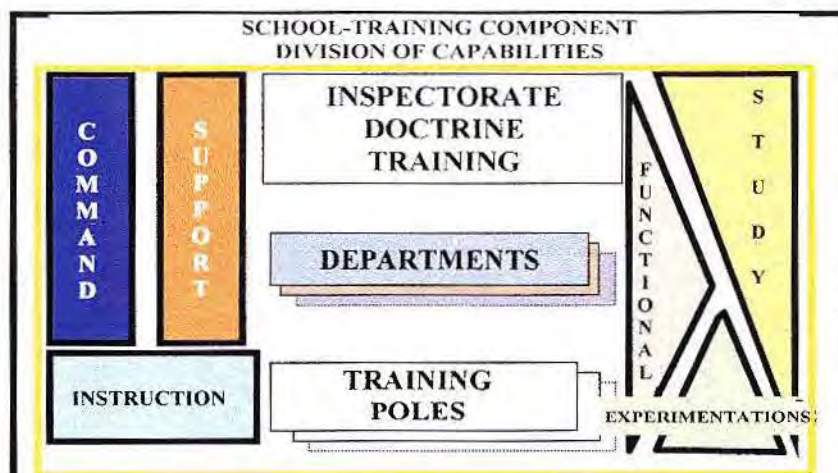
school/training area envisages a realization phase divided into two time horizons:

- **a nearer one**, concerning the immediate implementation of the measures aimed at adapting the Schools to the capabilities they are called to express in the sectors of personnel instruction, study of regulations and employment procedures, experimentation of equipment and system employment techniques;
- **a distant one**, which tends to reconfigure the Schools on the basis of the «Army 2010-2015» model.

Short-term adaptations

The most significant measures - being now implemented within the school organization - stem from the need to adapt and improve the preparation of Cadres and units in basic sectors of the modern scenarios of employment.

Fig. 12



The school-training component should have a very simple structure, with a maximum of three "levels", permitting:

- the rational and "economic" distribution of the capabilities to develop;
- the easy coordination of the activities corresponding to the capabilities;
- the efficient exercise of Command and Control, in order to optimize the resources assigned to the component as a whole.

We refer, in particular:

- to the conduct of military operations other than war (MOOTW);
- to the development of the RSTA (Reconnnaissance, Surveillance, Target Acquisition) function;
- to the Explosive Ordnance Disposal.

As a matter of fact, the peculiar employment procedures connected with the performance of the activities listed above require the availability of **areas, teaching capabilities and ad-hoc training systems** permitting to carry out the training activities according to standard procedures.

Therefore, the establishment of special training Centres has been commenced, also through the reorganization of already available capabilities, at some Army Schools:

- MOOTW Training Centre;
- Training and Procedure Centre for RSTA and Manoeuvre;
- Clearance and Disposal Operational Centre.

MOOTW Training Centre

The Allied Publication AJP-OI (Allied Joint Doctrine) includes in Military Operations Other Than War (MOOTW) a wide range of activities: Conflict Prevention, Peace Support Operations, Humanitarian Aid, Non-Combatant Evacuation Operations (NEO), etc. With reference to the tasks assigned to the Italian Armed Forces, MOOTWs are generally included in the mission «**Defence of external interests and contribution to international security**». Furthermore, the national doctrine envisages a range of military operations that can be considered «other-than-war within the «Presence and Surveillance» mission. They are (Fig.13):

- advanced presence for surveillance of the borders and conduct of deterrent activities;
- control of the national territory for prevention/repression of

illegal activities;

- cooperation with the Police Forces in the maintenance of public order.
- cooperation in case of disasters, activities of public interest.

With reference to the above, MOOTWs can be classified in (Fig. 14):

- **military operations outside the national territory (PSO);**
- **military operations on the national territory** (advanced presence, safeguard of the national Institutions, national welfare).

Generally speaking, **the conduct of military operations other than war, in both international (mainly PSOs) and national context, requires the application of essentially similar employment procedures and individual/team techniques.** In other words, there are overlaps, concerning techno-tactical instructions, in the preparation of units for MOOTWs carried out in different conditions of employment. We refer, for instance, to the activation of checkpoints, patrol and escort procedures, searching techniques etc. conducted within PSOs and in the context of territorial control.

It follows that a special school structure for preparing the units and for working out/updating the norms of employment in MOOTWs - which often imply legal-administrative notions not always obtainable at the Units - will be a reliable reference point for all units of the Army.

Aims of the MOOTW Centre

The establishment of the MOOTW Training Centre aims at realizing «ad-hoc capabilities», in order to (Fig. 5):

- improve the specific preparation of the personnel (Cadres and Troops) and Units, with particular reference to the Projection and Reaction packages;
- update and spread the doctrine and the employment procedures of the units at all levels in the sectors of PSO and of the safeguard of the free Institutions and national welfare;
- cooperate in the standardization of the PSO training, both nationally and internationally (UN, NATO, WEU, PfP), giving a qualified contribution to the studies, in order to increase the interoperability level;

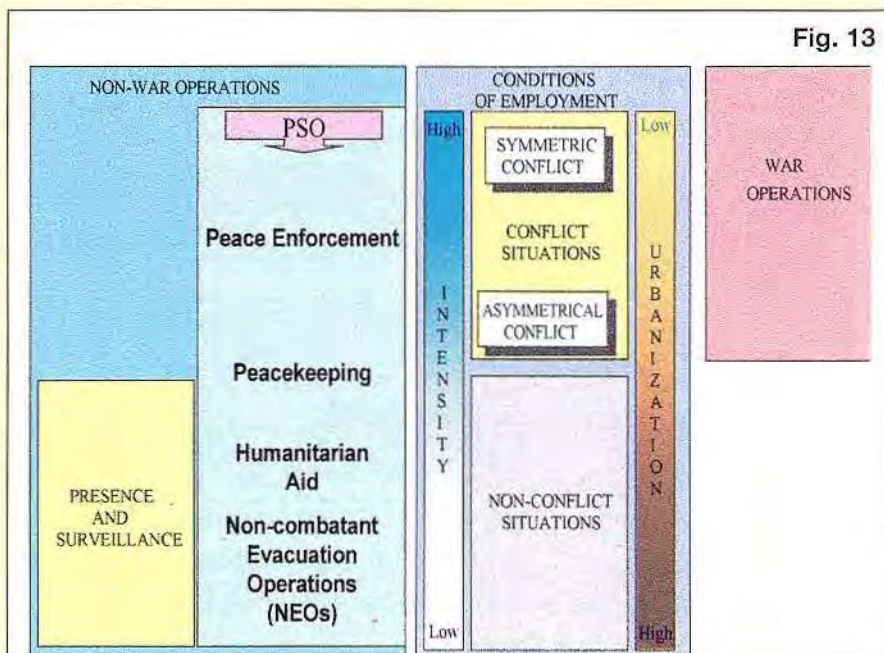


Fig. 13

- lay the foundations of the internationalization of the Branch Schools, in order to improve the quality of training and save resources.

The MOOTW Training Centre is a school structure for multicategory qualification and specialization.

On the basis of its functions within the PSO sector, the Centre will give short courses (Fig.16) availing itself of a team of regular instructors with the addition of external instructors with specific competences. The latter will be selected from the personnel of the units with experience in multinational operations or who have attended special courses, as well as from elements of the Central Organizations (Army Staff, Inspectorates), War College, or other Branch/Logistic Schools.

Taking into account what is being done at similar European Schools (Swedish School-SWEDINT, Austrian Training Centre, German School-HAMMELBURG), courses will be short and intensive. In particular, about 2 weeks for basic courses, 3 days-one week for the mission-oriented ones.

On the basis of the experience gained in the operations for the control of the territory carried out within the «Presence and Surveillance» mission, and bearing in mind the laws on the safeguard of the Institutions and the national welfare, training for the operations connected with the «Presence and Surveillance» mission are organized as follows:

- **basic training**, for all personnel, to be carried out at the employment units;
- **preparatory training**, for all personnel and units, to be carried out at the employment organizations only in case of particular operations (i.e. control of the territory, as was

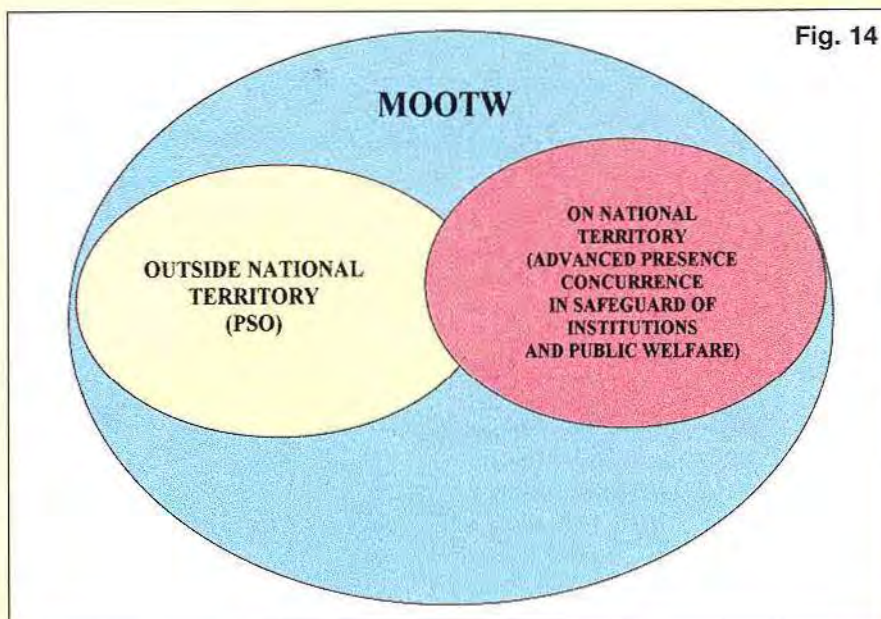


Fig. 14

AIMS OF THE CENTRE

Fig. 15

Enhance the preparation of personnel and Units, with particular reference to the «Projection» and «Reaction» Packages.

Update and spread doctrine and employment procedures.

Concur in the standardization of training

Start the internationalization of the Army Schools.

case with «Vespri Siciliani»).

Based on its functions within the «Presence and Surveillance» mission, the Centre will conduct the courses listed at Fig. 17.

In order to carry out an **employment-oriented training**, the Centre must know both the **employment scenarios** and the «intelligence» aspects of interest for the contingents to be employed in a given mission. In this connection, it will be necessary to establish and maintain a close liaison with the Force Employment Division of the Army Staff and with the Defence Staff's intelligence organization. Furthermore, the Centre must be provided with cartographic and photographic

material as well as with all other documents that can be used for the personnel's instruction, specially as regards preparatory training.

Training and Procedure Centre for RSTA and Manoeuvre

The capability of gathering, processing, evaluating and distributing - in a length of time compatible with the development of operations - detailed information on enemy forces, terrain and weather conditions, is one of the keys to success in any type of activity. Within this framework, the activities of the RSTA function confirm that they are absolutely necessary to

the Commanders at all levels, since they permit to optimize the management of the resources destined to the IEW function (Fig. 18), of which RSTA is a subfunction.

Within the Service, at operational and tactical level, these activities concern, or will soon concern (Fig. 19):

- **Special Forces, LRRP and Ranger units**, for tasks of wide-range reconnaissance (special recce) and search/acquisition of targets, with capabilities in the sector of the RSTA/HUMINT source;
- **IEW units**, for tasks of surveillance of the zone of responsibility and search/acquisition of targets, with capabilities in the sector of the RSTA/SIGINT and RTSA/MASINT sources;
- **SORAO units** for tasks of surveillance of zones of responsibility and search/acquisition of objectives with capabilities of the RSTA/MINT sources;
- **Scouting Cavalry units**, for tasks of short-range reconnaissance (by force or concealed) with capabilities in the sector of the RSTA/HUMINT sources;
- **Army Aviation (AVES) units** with combat and combat-support helicopters, for tasks in support of short-range reconnaissance, surveillance of zones of responsibility and search/acquisition of objectives with operational capabilities essentially in the RSTA/HUMINT and RSTA/IMINT sources. At present, the responsibilities for the basic techno-specialistic formation of personnel and units in the various sectors of the RSTA function are distributed as shown at Fig.19.

Taking for granted that the techno-specialistic formation of the personnel designated to operate in the various sectors must remain under the responsibility of the appropriate

Fig. 16

THE CENTRE'S DIDACTIC ACTIVITY	
BASIC COURSE FOR INSTRUCTORS	DURATION: 2 wks PARTICIPANTS: Jun off, NCOs, marshals, sergeants, vol.
BASIC COURSE FOR SPECIALISTS	DURATION: 1-2 wks PARTICIPANTS: Staff off, log and CIMIC sp, PI, LO
MISSION-ORIENTED COURSE	DURATION: 3 days PARTICIPANTS: contingent's key Personnel and Specialists

Fig. 17

THE CENTRE'S DIDACTIC ACTIVITY		
P S O	BASIC COURSE FOR INSTRUCTORS	DURATION: 2 wks PARTICIPANTS: Jun off, NCOs, marshals, sergeants, vol.
	BASIC COURSE FOR SPECIALISTS	DURATION: 1-2 wks PARTICIPANTS: Staff off, log and CIMIC sp, PI, LO
	MISSION-ORIENTED COURSE	DURATION: 3 days PARTICIPANTS: contingent's key Personnel and Specialists
Presence and Surveillance	QUALIFICATION COURSE	DURATION: 1 wk PARTICIPANTS: Off from Regt. Hqs; Coy cdr

Organizations/Schools/Centres (Fig.20), **there was the need to find within the Service a «pilot» Organization capable of integrating, after the basic training, the single capabilities acquired separately by the personnel and units concurring in the development of the function.**

Another requirement to be met,

together with the one relevant to RSTA, is the procedural training of the manoeuvre forces.

The **manoeuvre forces**, to which the «Combat» function is assigned, consist of Infantry or Cavalry units (light, mechanized or armoured), which conduct the battle mainly with direct-fire weapon systems. The manoeuvre forces include AVES attack

helicopters and airmobile units. Besides being a component of the manoeuvre forces (attack helicopter Regiments, which may or may not be included in an airmobile complex), the AVES aircraft play an equally direct role in the employment of these forces. This role finds its concrete form in the conduct of combat, reconnaissance, surveillance, C2 support, tactical and logistic transport etc.

In practice, the AVES component develops activities of RSTA, combat-in cooperation with other manoeuvring forces - combat support and logistic/medical support to combat. In view of this, **the manoeuvre requires a continuous integration between the surface land forces and the third dimension.** Therefore, the development of offensive, defensive and delaying operations - where it is fundamental to achieve surprise and to concentrate efforts at the desired moment and place, i.e. **to manoeuvre forces in space and time** - requires, besides a constant training, also **well-established procedures permitting the coordinated and cooperative employment of land forces and third dimension.** These procedures must also be updated in relation to the introduction of new aircraft, new Command and Control systems, evolution of the employment procedures of the minor units, new technologies (**the trinomial «land vehicle-helicopter-radar integrated with satellite technologies»**).

In view of the above considerations, the Cavalry School, besides the mentioned responsibilities in the sector of training of Cadres and procedural training for RSTA, **has the task of experimenting and updating the employment procedures of the armoured units in cooperation with the third dimension.**

Fig. 18

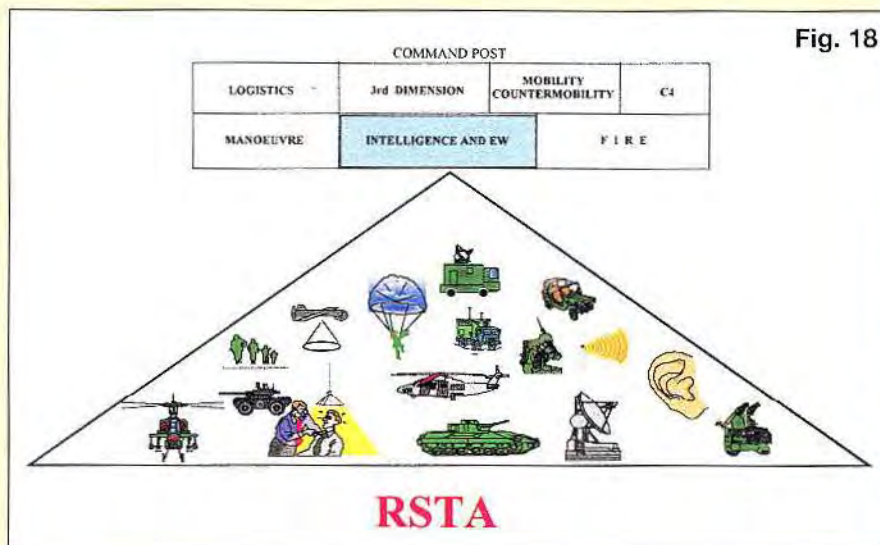


Fig. 19

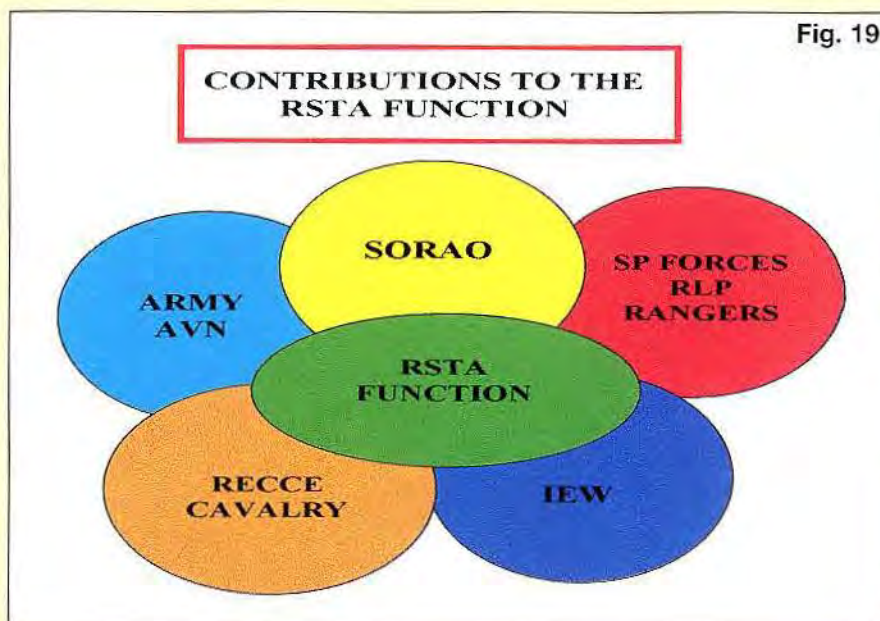


Fig. 20

RSTA ASSETS	ORGANIZATIONS RESPONSIBLE FOR TECHNO-SPECIALISTIC TRAINING
SORAO Units IEW Units RLR Unit	IEW Department (Anzio)
Operational det. Special Forces	9th "Col Moschin" paratroop Regiment (Livorno)
Rangers	"Monte Cervino" Alpini bn. (Bolzano)
Crews of heavy and light armoured cars	Armoured Troops School (Lecce)
Recce units Flight-crews, Light Aviation aircraft	Army Light Aviation Centre (Viterbo)

RSTA and Manoeuvre training and procedural activity.

Basically, the responsibilities of the Centre include two sectors: **qualification and specialization of the Cadres** of the armoured units, **and procedural training of the systems and minor units** concurring to RSTA and Manoeuvre.

As regards RSTA, taking into account the complexity and diversification of the units, equipment and systems concurring to RSTA, the procedural training must be conducted progressively and, initially, by separate and independent modules.

In practice, the following independent activities must be carried out:

- **1st level exercise:** tactical reconnaissance, conducted only by the minor units (Fig. 21). Duration: 1 week (2 days theory; 3 days at the firing range);
- **2nd level exercise,** with the aggregation of two or more modules/systems for the conduct of cooperation-oriented partial exercises (recce units, AVES units, LRRP patrols) (Fig.22). Duration:1 week;
- **3rd level exercise,** with the aggregation and deployment in the field of all modules and systems for the development of the RSTA function, and the conduct of a composite exercise directed by an Intermediate Operational Command (COI - Fig. 23). This exercise will be carried out biannually and could be included in a training context like, for instance, a Command - Post Exercise (EPC).

This activity is the characterizing aspect of the Cavalry and Armour School. In prospect, when the School acquires the full capability to manage all the activities of the RSTA function, the above-mentioned 3rd-level exercise will

have to include:

- a COI Command-Post and 1-2 Brigade Command-Posts;
- an armoured reconnaissance-unit, taken by turns from the «Projection and Reaction Packages»;
- EC and ESC units of a COMFOTER Army-Aviation Regiment;
- Systems taken from the units of COMFOTER's IEW Group (SIGINT, SORAO, RLR);
- FS and RANGER Detachments.

At the level of exercised Commands this biannual activity will have to involve, by turns:

- at COI level, the Projection Forces Command (FOP);
- at Brigade level, in order of priority:
 - the «Pozzuolo del Friuli», «Ariete», «Garibaldi», «Friuli» and «Centauro» projection/

reaction Brigades;

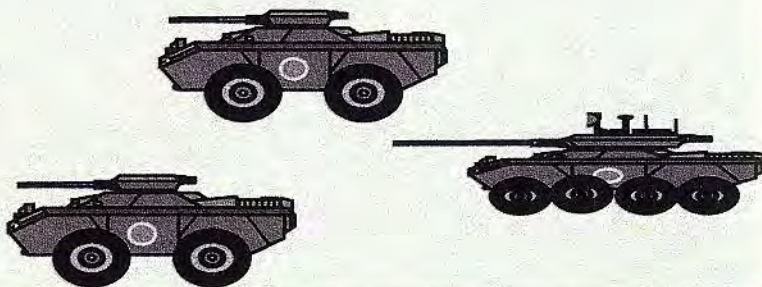
- the «Folgore» and «Taurinense» projection Brigades;
- the «Julia» Brigade, as Multinational Land Force (MLF)

During the transition period, this activity could begin with exercises involving only one Brigade-CP and minor RSTA systems (recce unit, AVES and LRRP elements) connected with the CP according to a training schedule to be defined at a later date.

The procedural training in the manoeuvre sector will have to be carried out envisaging the execution of different types of **cooperation exercises with tanks, armoured cars and attack and non-attack helicopters** in order to experiment, study and enhance the procedures of employment that permit to

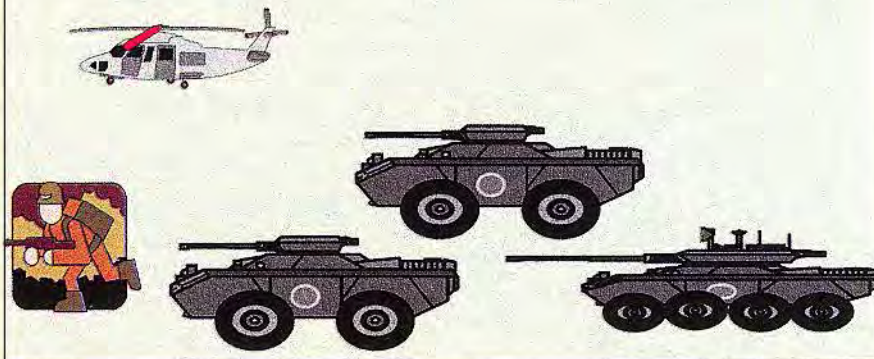
Tactical - reconnaissance training

Fig. 21



Tactical - reconnaissance training combined with 3rd dimension and LRRP

Fig. 22



facilitate and improve the conduct of the manoeuvre.

In particular, the activities will have to involve minor formations, constituted «ad-hoc» for limited periods of time and biannually, with (Fig. 24):

- minor units, with precedence to those taken from the «Reaction Forces Package» Brigades;
- Army Aviation units from the AVES Regiment of the air-mobile Brigade.

Clearance and Disposal Operational Centre (COB).

The COB, under reorganization at the Army Engineer School, performs both training and operational tasks. As regards the operational functions, two employment areas are connected to the Centre: one outside the national territory (clearance in the operations zone) and the other in Italy (clearance of minefields and different types of ordnance, including residuals from war events). The Centre conducts qualifying and updating courses, and issues certificates in line with NATO STANAGs.

Furthermore, the Centre has a data bank with detailed technical information on most mines existing in the world: nationality, objective, type of action, shape, dimensions, etc. and include a

photograph or drawing of the device. Of course, the availability of these data is a very useful support to both training (preparatory courses, and training of contingents for PSO) and operations (clearance of minefields and dangerous areas).

Longer-term adaptations

For longer-term prospects, one should refer to the characterizing elements of the evolutionary process of the military instrument as well as to the force multipliers of the human element: leadership and motivation. The main elements of the evolutionary

process are:

- the degree of innovative intelligence, expressed by the joint research and development of ideas and realization concepts, before turning to materials and assets;
- the ability to keep up with the growth of professionalism and technology, through the development of formed concepts adequate to the capabilities expected from the personnel;
- the degree of the Army-system's intelligence of those concepts, applied through the employment of the men and materials that



Fig. 24

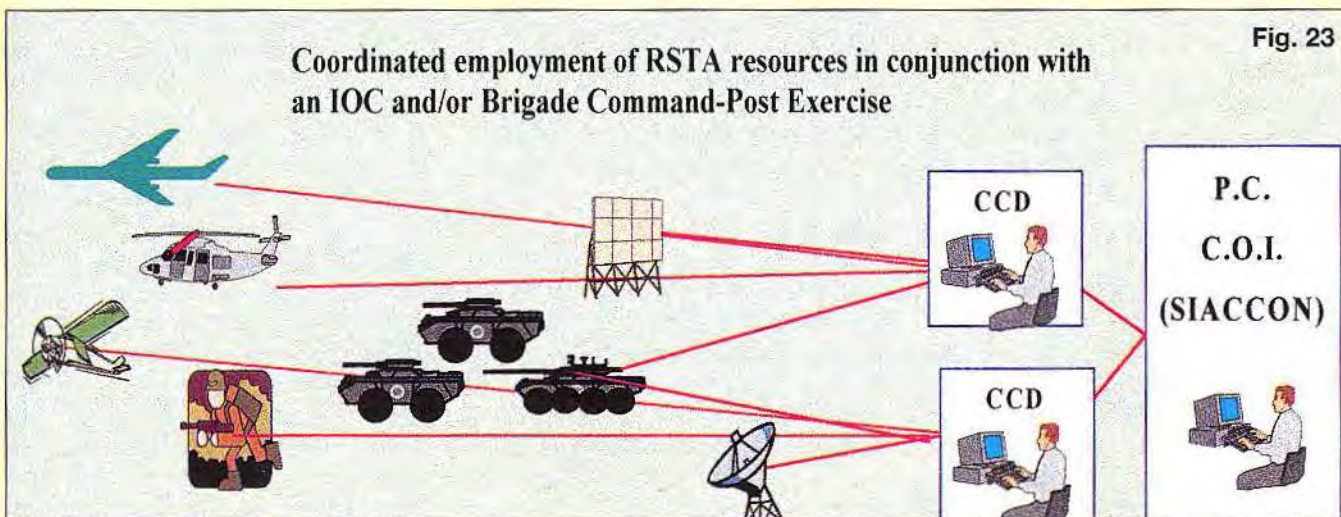


Fig. 23

compose the Service.

A modern Army, in fact, finds its expression through the permanent integration of all its elements and its capability of flexibly integrating its components into task forces - consisting of men and technologies - whose duty is to carry out planned or contingent assignments. On the basis of these tasks, trained and professional men employ sophisticated and innovative technologies in the fields of mechanics, electronics, automation, informatics and satellite communications, mainly applied to the functional sectors of command and control, to the thrust and protection capabilities of the armoured forces, the power of the controlled-effect surgical fire of artillery and Cruise missiles, the exploration of air and land spaces, integrated with the «land-vehicle, helicopter, radar» trinomial.

As far as leadership is concerned, it should be observed that the instrument's fragmentation and the wide propagation of information in the modern operational scenarios tend to multiply the highly important points and decision moments, especially at the lower levels. It is therefore necessary to develop the so-called diffused leadership which, although it can use advanced control-systems, requires highly qualified personnel prepared to make decisions, thanks to their professionalism and character.

Schools and training must actually be aimed at developing in the individual - at every level, and according to his rank - the ability to operate as an active and cooperative subject in differing and dynamic, national and international, environments, so as to pursue his personal success only as acknowledged result of the contribution given to the achievement of the «social best», i.e. to the objectives of the group or the institution the



subject belongs to. The military man is judged on the basis of the results he obtains and is gratified only functional to the success of his organization.

The second force multiplier for the human being is motivation, and is closely connected with the first.

Motivation stems from conviction, enthusiasm, passion. Motivation lets us do things we never believed ourselves capable of doing.

Nevertheless motivation has also rational roots, and they are perhaps the strongest and the most reliable, because they are implanted in reason and not in emotion.

The ideal motivation gives the force to fight. The rational motivation (the professional's) gives the power to win.

How do we build then rational motivations in a man? The answer is simple, but the



solution is difficult and laborious: the achievement of a high-degree of professionalism. The military organization is a machine whose objective effectiveness and efficiency as regards the services it should render to society are chiefly entrusted to the professionalism of the protagonists. Every member of this organization must be a professional and feel like one, because he is called to

provide his expertise and to correctly operate the mechanism he is responsible for, of which he knows the workings perfectly.

To lay out the future structure of the school-training organization according to the emerging pointers, a project is being drafted to constitute an Authority for Doctrine, Procedures and Training, a kind of Italian TRADOC, to which also the sectors of applied Operational

Research and Simulation would be attached, in support of decisions and planning.

The said Authority and the Agency to be instituted under its control, will have to implement the propulsion model of the Army. They will be formed through the aggregation and the reorganization of the resources that now operate within the Inspectorates of Services and Schools.

In particular, this Authority would have the task of systematizing the generative process of the Land forces' basic requirements - the capabilities - in the various operational and cooperative environments.

This process, to be carried out in the appropriate international meetings, starts with the definition of the scenarios and is followed by the elaboration of the operational concepts. After this, one goes on experimenting the concepts in virtual and real training environments as well as in an operational environment, thus activating and feeding the Cycle of the Lessons Learned.

The last phase of the process, which has moreover a continuous and self-adjusting cyclic character, consists in defining the forces' requirements as regards the six fundamental qualifying areas of a Service (man, doctrine, leadership, materials, force organization, training).

The mentioned Authority, besides, would represent the fulcrum of a system of verification and validation of the capabilities and of the units, as a precondition for their organic homologation and operational employment.

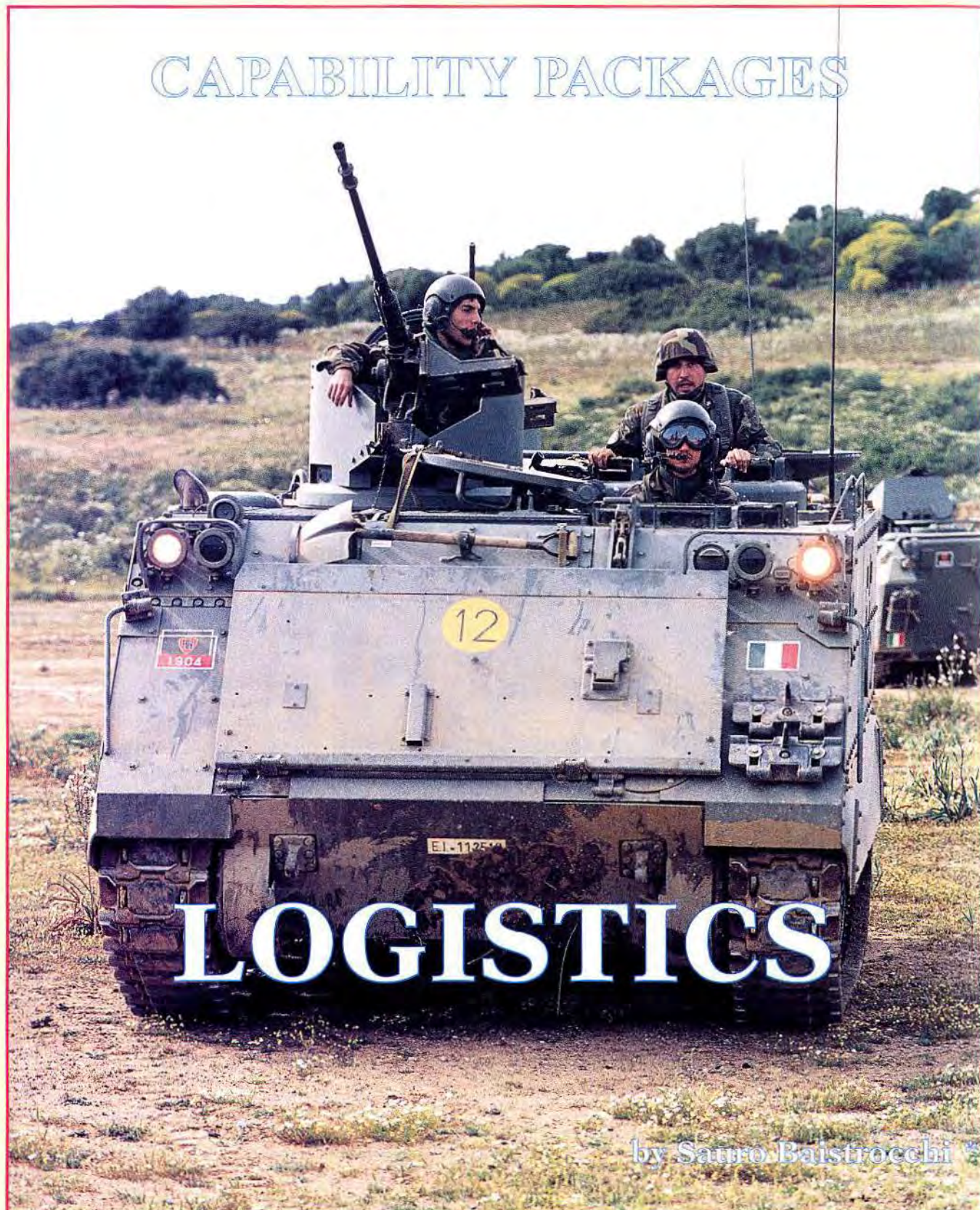
□

**Brigadier General,
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ARMY PROJECT 2000

CAPABILITY PACKAGES



by Sauro Baistrocchi

EVOLUTION OF THE OPERATIONAL SCENARIOS

During the four-décade-long bipolar confrontation in Europe the Italian Army - like the Armies of most NATO nations - was engaged in a credible and effective defence against a threat clearly defined as for its origin, direction and intensity.

The events of the last decade, although decidedly removing the prospect of a large-scale conflict in Western Europe, have made the scene of international relations much more complex and unstable and favoured, at the same time, the rising of the geo-strategic conditions for a preventive and essentially remote control of conflicts, be they latent or actual.

Once the concept of static defence was overcome, a common policy of dynamic security began to take shape within the United Nations, the Atlantic Alliance and within the dawning European Union. This policy is essentially projected outside national borders, towards the areas where, within a State or among States, situations of political, social or economic crisis occur, with possible conflict spirals and extension to the neighbouring territories, or with the possibility of affecting the general interests of economic development and social progress.

Within this framework, the employment of the Italian Armed Forces and, in particular, of the land forces, a primary tool of the Peace Support Operations (PSO), assumes a new value, much more active and dynamic than that of the «cold war» years.

The Army, therefore, if in the long term is still a producer of forces, trained for deterrence and defence, on the front of the multinational control of outside-the-border conflicts, becomes an instrument able to express, at short notice, real operational capabilities, including

combat ones.

The operational scenarios that can be imagined today and for the future can tentatively be grouped into three main types of conflict:

- conventional conflict between forces with basically equal capabilities;
- asymmetrical conflict between forces with various and diverse degrees of capability;
- other-than-war operations, particularly those in support of peace.

The types of conflict pointed out, which no doubt take root in today's reality, blend one into the other and overlap in time and space.

Nevertheless, they have in common significant general characteristics, some of which are of particular interest for the purposes of this study.

First of all, it is evident that there is a persistent tendency towards a preventive and remote management of the crises, with the employment of multinational and joint formations, relatively limited in size, for operations outside the national borders.

The asymmetry of the opponents increases. The operational environment tends to extend more and more to include new dimensions of conflict and to assume markedly non-linear characteristics.

Furthermore, the environment becomes increasingly urbanized.

The interconnections and overlappings of the tactical, operational and strategic levels become more complex and dynamic, and are fostered by the conditions posed by public opinion and politics, also with reference to the safeguard of the environment and the possible explosion of the humanitarian dimension of the conflicts. The contours of tasks and responsibilities tend to fade away and assume a marked character of non-linearity. The individual soldier becomes increasingly important and costly,

and tends to be considered an individual operational platform.

The role of logistics, more and more important for operational success, is extending far beyond its traditional scopes.

THE REFERENCE LOGISTIC CONCEPT

In the last years, logistics went through a significant streamlining process. Nevertheless, especially after the most recent operational experiences, some important shortcomings have emerged, concerning a residual gravitation toward the North-East of the mentality and of the available resources, as well as some functional discontinuity between the Support Level and the Adherence Level. Even the direct support to the forces, in some cases, was not as effective as expected, while the logistic system as a whole was considerably onerous. Moreover the technical-administrative regulations are still under review for they are too complex and intricate, considering the concrete requirements of the command action.

The Reference Logistic Concept, devised within the framework of the Capability Packages and specific subject of this article, is the theoretical prerequisite for a more systematic reconfiguration of logistics in the Service, aimed not only at overcoming the shortcomings perceived but, above all, at building a support expressly modeled on the requirements deriving from the outlined scenarios of employment, according to an approach that considers the real operational capabilities and inspires the whole concept of the «Packages».

As the selected denomination shows, the «Concept» is nevertheless a conceptual reference scheme whose validity and feasibility will have to be fully verified before translating its dictates into

organizational measures.

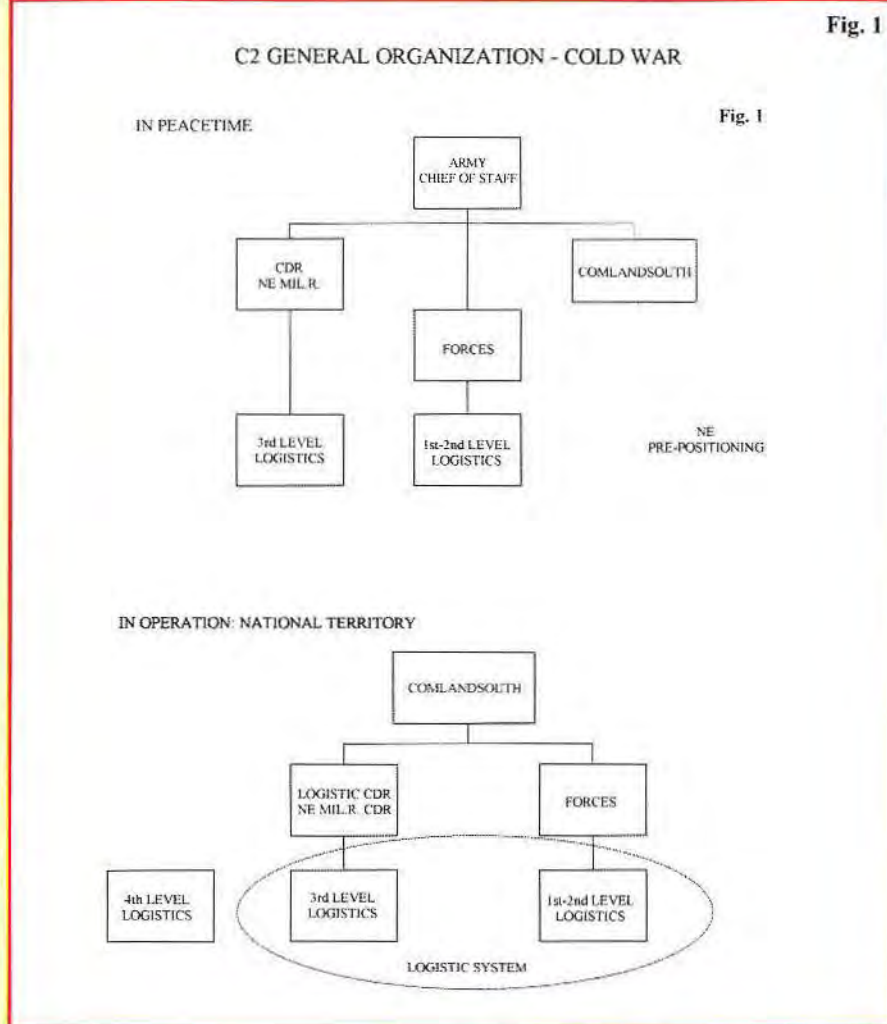
The basic idea subtended by the Concept is a radical change in the gravitation of the support assets, no more statically anchored to the national territory and to a well-defined threat, but dynamically reconfigured, in terms of mentality and capability, for the projection and sustainment of formations - also multinational and joint - engaged in operations outside the border.

The approach is greatly innovative also from the organizational point of view. From a mass logistics, essentially based on potential needs, with burdensome and «just in case» unused stockpiles and capabilities, we move to a high-quality support, based on the scientific determination of the actual requirements (tendentially «just in time»), accomplished by specialized bodies, according to centrally-executed plans and programmes. The user (the Operational Commander) is relieved of the technical-administrative responsibility of the support: however, he has full authority as regards definition of needs and control (within pre-established limits) over the inflow of resources.

The purpose of the model proposed by the Concept, in substance, is to build a logistic instrument, not only effective and flexible - being structured on the basis of the needs of the in-Theatre Operational Commander, an controlled directly by him - but also efficient in economic terms, since it aims at giving a certain return vis-à-vis a calculated and accepted risk, using only the necessary resources.

The Reference Logistic Concept, which this article, for obvious reasons of space, only illustrates in its essential features, is centred on five cornerstones, which support its logistic and organizational layout:

- **Great Base;**
- **Command and Control Organization and Logistic System;**
- **Programme of the logistic activities;**



- Specialization of the logistic bodies;
- Capability of multinational logistic integration.

Some organizational aspects of the Concept are represented in Fig.1 and 2, in terms of comparison with the classic scenario of the past and could serve as a general help in reading this article.

Before discussing the main points of the Concept, some general clarifications are necessary.

Logistic is the discipline presiding over the support to the operations and forces of the military instrument. In the present context, logistics must be understood according to a wider meaning than in the past, in that it includes sectors, as those of force projection, personnel supplying, infrastructural support, Host Nation Support (HNS), cooperation

and multinational integration.

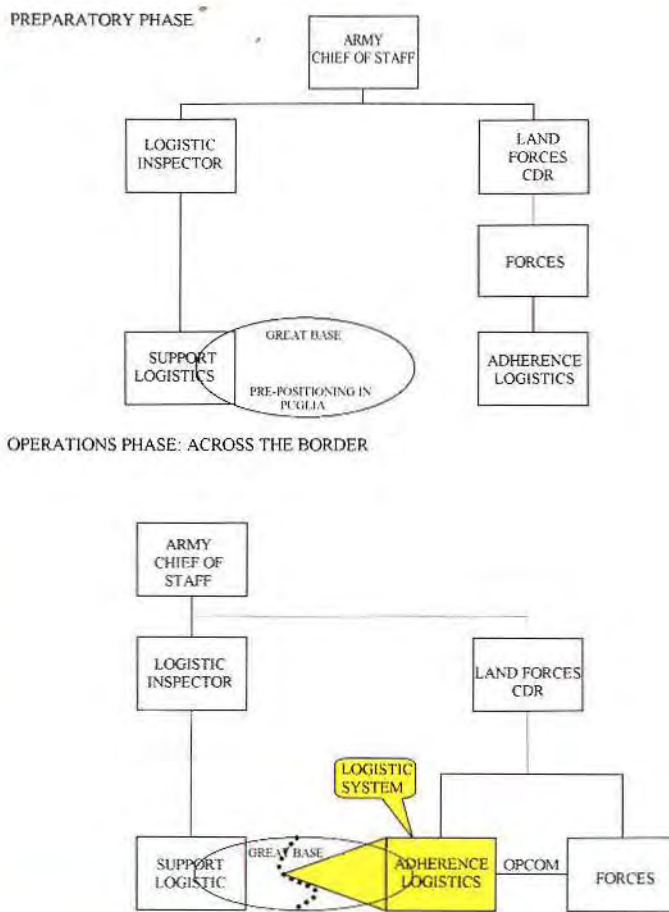
Together with the enlargement of its field of interest, the scope of the «traditional logistic activities must also be extended. These activities on the other hand, can still be defined in terms of provisions, supplies, recovery and clearing, maintenance, medical activities, transport and administration.

The term «**Logistic Organization**», instead, includes the organized complex of concepts and procedures (software component) as well as personnel, equipment and resources (hardware component) aimed at supporting, from the logistic point of view, the preparation, set up and employment of the land instrument.

The **Logistic System** is a specific organized complex of concepts and procedures (software component) as well as personnel, equipment and

C2 GENERAL ORGANIZATION - POST COLD-WAR
REFERENCE LOGISTIC CONCEPT

Fig. 2



the national land instrument, producing Logistic Systems capable of sustaining, at support and adherence levels, with calculated effectiveness and logistic risk:

- the preparation of Commands and units;
- the set up and projection of the forces, on the national territory and outside the national borders;
- the performance of the assigned task in the area of employment.

The aim of **the Logistic Systems** is to support:

- as a priority, in the short/medium term, operations of peace-support (also conflict-type ones) and of control of the territory;
- in the long term, the larger requirement of security and direct defence of the Country.

THE GREAT BASE

Figures 4 and 5 show a model of a **Great Base**, respectively in a situation of normality (no operations under way) and after the activation of a Logistic System. The Great Base (G.B.) is a complex

resources (hardware component), produced by the Logistic Organization and aimed at supporting a particular mission assigned to the land instrument or to a portion of its forces.

Therefore, there is only one Logistic Organization, able to produce several Logistic Systems (shown at Fig.3 as A and B), generally one for each scenario of employment, type of mission (or group of similar scenarios) or for each large-scale activity of the instrument.

Within this framework, **Adherence Logistics** provides a direct support to the forces, while Support Logistics guarantees the necessary flywheel of capabilities and resources, for the requirements of adherence as a whole.

The Logistic Organization guarantees the logistic support to

THE LOGISTIC ORGANIZATION

Fig. 3



logistic structure at Support Level, located on the national territory. It represents the model of reorganization of the logistic resources available, and its purpose is to support the projection of the Forces outside the national borders and their sustainment in operations of peace support, crisis management and conflict-type operations guaranteeing also the necessary hardware-and-software interface between Support Logistics on the national territory and the Adherence Logistics in the Operations Zone.

The Great Base consists of:

- a G.B. Command (division level);
- one Operations Room for Support Logistics (SOSTLOG) and 1-2 (1) Operations Rooms for Adherence Logistics (ADERLOG);
- assets for the launching and support of the operations;
- a G.B. management unit which deals with the resources.

The Great Base is a flexible model, capable of supporting the wide spectrum of concrete organizational solutions included between the following two extremes:

- lower extreme = virtual G.B. it is the minimal configuration from the physical point of view. The G.B., in this case, consists only of Command and Operations Rooms. Management units and resources are spread on the territory, sometimes at great distances, but their control is centralized at SOSTLOG;
- upper extreme = physical Great Base: this is the maximal configuration from the physical point of view. All resources, including the infrastructural ones (2), are materially included in a great unitary logistic structure. All organizational solutions included between the two extremes permit to solve the logistic problems, obviously with different levels of effectiveness (capabilities) and efficiency (costs): minimal effectiveness and maximal costs for the virtual Great Base,

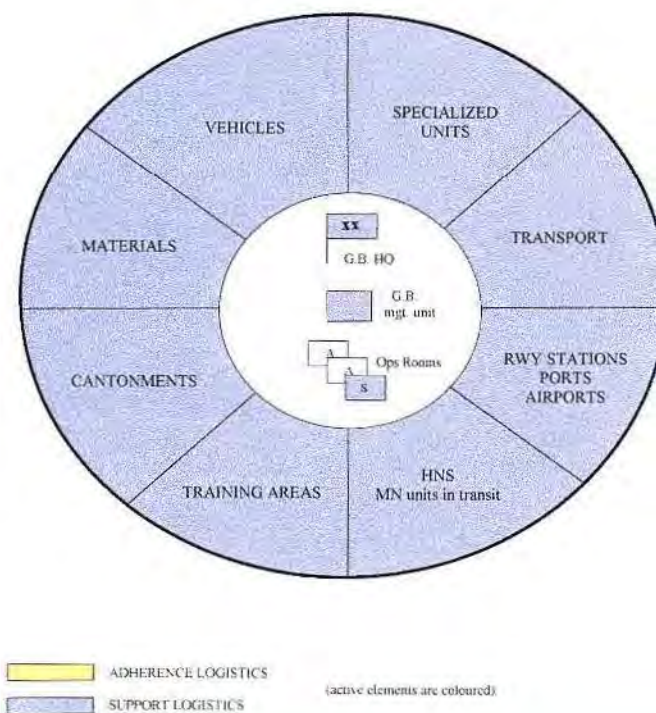
maximal effectiveness and minimal costs for the physical Great Base. The idea of «Great Base» stems from the following main arguments:

- the gravitation of the Projection Forces (FOPs) is towards the Southeast/South, i.e. the Balkans, the Middle East, North Africa (geostrategic area of primary national interest); on the other hand, the operations for the control of the territory take place mainly in Southern Italy. Therefore the centre of gravity of the support logistics is without a doubt in the South, preferably in Puglia;
- having found a precise and reliable centre of gravity gives us the great opportunity to concentrate the capabilities of the support logistics, achieving potentially important savings in all logistic activities;

- in particular, without prejudice to the distribution of the forces (including the adherence support) over the entire national territory, stocks at all levels can be in part consumed and not replaced, and in part gathered in a small number of prepositioning depots (3);
- furthermore, as regards vehicles and weapon systems it is possible to proceed to a reductive revision of the size of the units that control the territory (4). But, above all, vehicles and weapon systems, in numbers appropriate for specific standard options of employment and for control of the territory, can be gathered in a limited number of pre-positioning parks (of the Camp Darby type), appropriately located;
- the exit points of the forces must be selected and equipped (also

Fig. 4

GENERAL STRUCTURE OF THE GREAT BASE NO LOGISTIC SYSTEM IS ACTIVE



from the bureaucratic point of view) beforehand, i.e. once and for all. One port, one airport and 1-2 railway stations (in the Brindisi/Bari area) are sufficient. In fact:

- to have more than one exit point does not make sense, considering that the bottlenecks when introducing the Forces in the Theatre are the entry points and not the exits from Italy;
- if the employment Theatre is **local** (within the mentioned geostrategic area) the Apulian are the best. If the Theatre is remote, it does not make much difference whether the embarkation port is Bari or Genova; the fact remains that, if necessary, part of the personnel can be embarked at any airport;
- should the Theatre be in Eastern Europe, (transport by rail), materials could anyway be loaded from ad-hoc platforms



GENERAL STRUCTURE OF THE GREAT BASE
Operation Under Way: ONE LOGISTIC SYSTEM IS ACTIVE

Fig. 5

placed very near to the **parks and prepositioning depots.**

In any case, the location and permanent organization of the exit points are extremely important for a good layout of the logistic instrument.

For the above reasons, the Great Base should preferably be located in Puglia. Just by way of example, Fig.6 shows a possible experimental prototype of such a solution, to which the following main resources, proportionate to the standard options of employment, should be assigned/allocated:

- **prepositioning parks** for vehicles and weapon systems, for the initial conditioning of the FOPs and sustainment of the operations (replacement of inserviceable materials removed from the Theatre);
- **prepositioning depots**, for the initial conditioning of the FOPs (conferment of the basic autonomy) and provisioning of the operations (supplies);

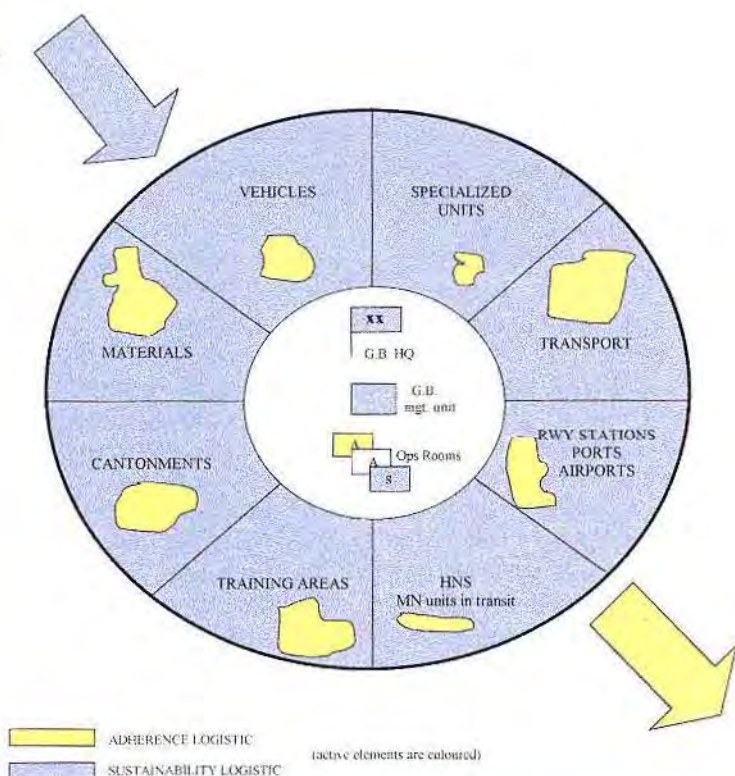
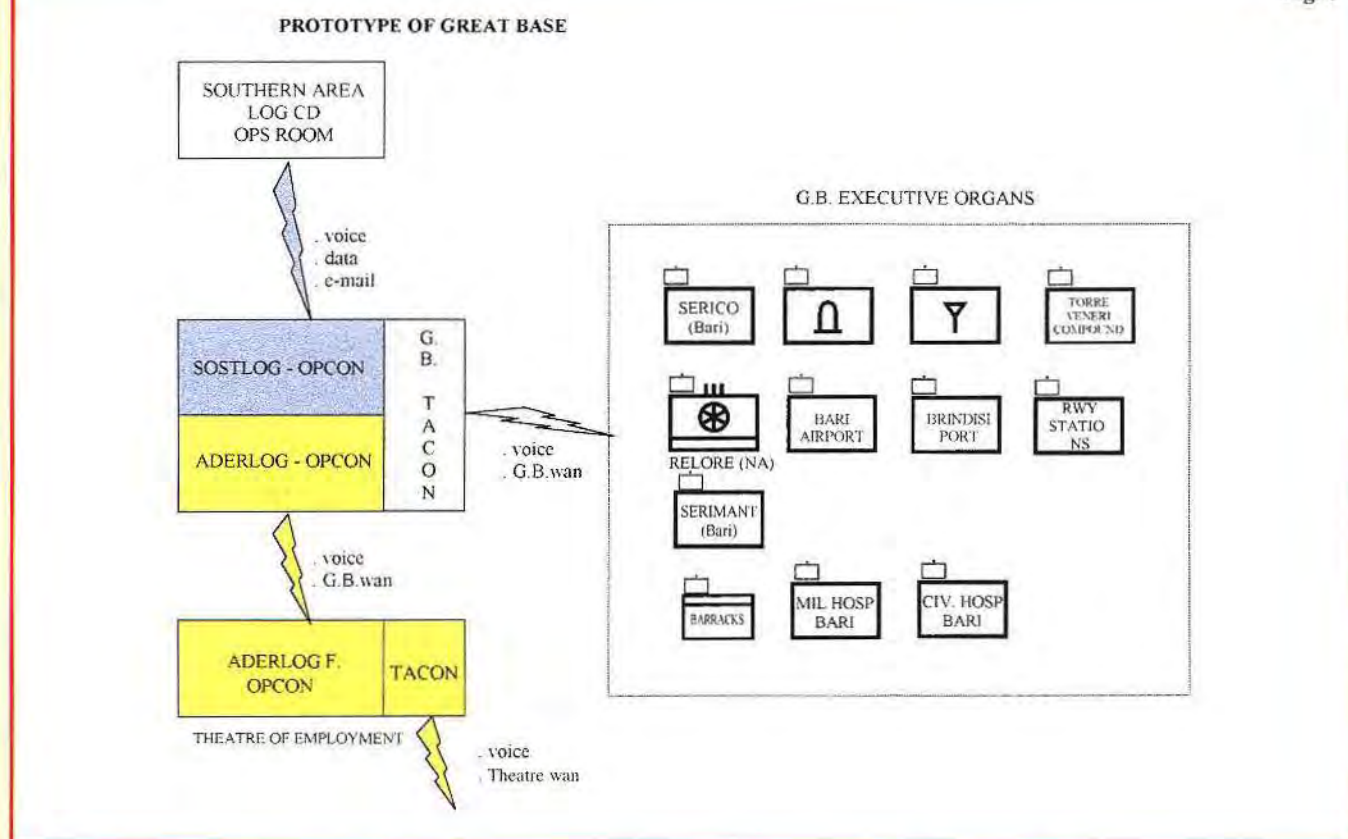


Fig. 6



- **organs for the maintenance** of Support, including civilian contractors to keep parks and materials in working order and to repair the equipment removed;
- **well equipped quarters and camps**, for the FOPs' stopovers, including possible non-national units (Host Nation Support activity on Italian territory) waiting for their introduction in the Theatre;
- **training areas and shooting ranges**, for the activities of preparation and amalgamation of the FOPs;
- **railway stations, ports and airports, and the relevant limits for their management**, i.e. exit points to be used for the projection of the FOPs, their rotation and the logistic assistance to operations;
- **vehicles**, in the shape of specifically assigned units (motor vehicles, helicopters) or **movement credits** (military and commercial aircraft and ships) for the transport of forces and

- materials;
- **specialist units** (communications, maintenance, engineers, medical corps, traffic control, etc.) for the functioning of the Great Base itself, for logistic reconnaissance (specialized contribution) and for projecting **contact teams** into the Theatre. In compliance with the permanent and contingent directives issued by the responsible Commanders (ISPELOG, COMFOTER, COMFOP) for their respective sectors of responsibility, the Great Base should:
 - plan the parks for vehicles and materials according to the standard options, and precondition them for projection;
 - plan and carry out, together with FOPs operation teams, the preliminary in-Theatre reconnaissance, providing, in particular, a specialized contribution, also in relation to the negotiation of MOUs and technical-logistic agreements.

- ensure the maintenance and the efficiency of the parks assigned, perfecting their composition and setup according to the specific operational events and the results of the preliminary reconnaissance;
- schedule and monitor the transfer of the FOPs from their garrisons to the Great Base, concurring, if necessary, to the organization and execution of the movement;
- guarantee full support (reception, logistics, cantonments, training areas) to the halting FOPs as well as to the non-national units that may be in transit HNSI;
- carry out the conditioning of the FOPs, including the handing over of materials and equipment to the Contingent's depositary;
- load forces and materials on the vehicles and project them into the Theatre, for the initial introduction and successive periodic rotations;



- ensure the logistic support of the operation in progress for all its duration;
- plan and carry out the movements for the withdrawal of the FOPs from the Theatre.

At the beginning, the Great Base would have, an essentially «virtual» character, being realized through the concentration of resources and capabilities distributed over a large area of southern Italy. Later it could also assume a physical configuration, in order to exploit in the best possible way the savings obtained from the concentration of infrastructure, materials and equipment, and to optimize the performance of the support units.

THE ORGANIZATION OF COMMAND AND CONTROL

The second milestone of the concept is the **Organization of Command and Control**, which is

the very essence of the working mechanisms of the Great Base and of the Adherence Logistics in the Operations Zone. It permits to centralize the control and management of resources and capabilities, as well as a rational **Schedule of the Logistic Activities**, resting on the logistic responsibilities of the higher Commander (mounting Headquarters) - giving a new meaning to the principle of «home-delivery» logistics - and also on the development of essentially preventive interventions.

The C2 organization, centred on the Operations Rooms, integrates the Great Base - which is the instrument of Support Logistics - with the Logistic System of the operation corresponding to the standard option of employment, i.e. «mission tailored», after the Adherence Logistics' typical jargon.

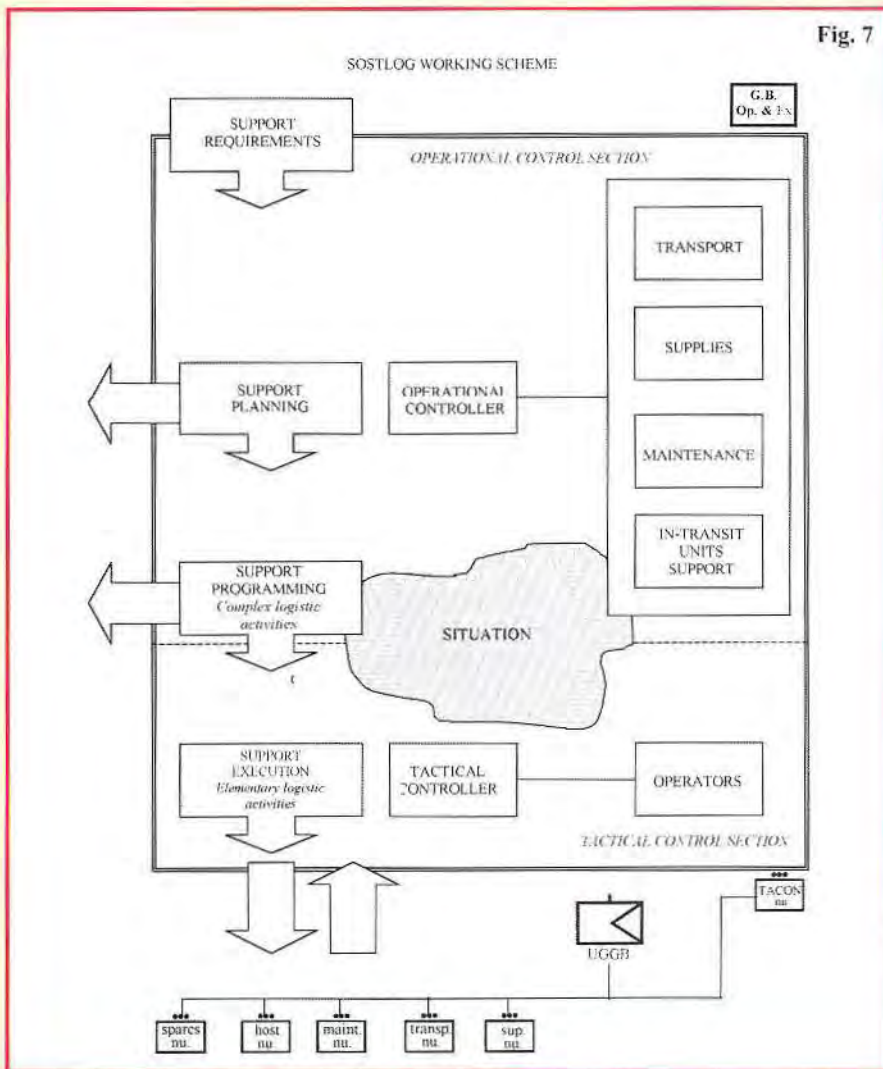
When a specific operation is launched, the preconditioned resources corresponding to the interested options are activated,

together with and **Adherence Operations Room (ADERLOG)**, which starts working materially side by side with the **Support Operations Room** which, instead, operates permanently. Fig.7 shows an example of a SOSTLOG's working scheme.

As we mentioned before, the activated resources, which include not only those for conditioning the FOPs, but also those for their support by the Great Base, are immediately allotted to ADERLOG and constantly kept at the right level or adjusted by SOSTLOG, according to need. Therefore ADERLOG is able, from within the Support Great Base itself, to direct the assistance to the operation in the Theatre.

These are the terms in which the generation of the Logistic System relevant to the operational option in progress should be understood, and within which the Adherence Logistics will be successively activated.

Fig. 7



The Great Base, by closely integrating Support and Adherence within its structure, guarantees the unity of the Logistic System, excluding potential fractures or gaps between the two Levels.

The working principle of the Operations Rooms, SOSTLOG and ADERLOG, is the basic feature of the C2 organization, in that these Rooms conduct the centralized control of the entire logistic support of the operation.

SOSTLOG and ADERLOG work side by side and are physically identical (same software and hardware) and therefore interchangeable after a software reconfiguration. They are respectively activated by the staffs of the Great Base Headquarters

and of an Adherence Logistics Headquarters (COMLOG), produced by COMFOTER or COMFOP, depending on the option.

The Rooms consist of an **operational control section**, headed by an **operational controller**, and a **tactical control section**, directed by a **tactical controller** who - albeit conducting specific elaborations related to their respective functions - avail themselves of the same data-base of the situation, which reproduces, among other things, the **logistic picture of the moment**.

The operational controller receives his orders and works out on a computer, the plans of the complex logistic activities, using the data-base of the situation to allocate the resources and

coordinate the programme for their employment. If necessary, he can transmit the plan, also on paper, to the Commands and Organizations concerned. However, he is not qualified to modify the situation data; in other words, he can use the **logistic picture of the moment**, but cannot directly interfere with it.

The Tactical Controller receives the devised plan on his display, and proceeds to its execution on the computer, according to the procedures fixed by the plan, directly employing the necessary resources and constantly controlling the development of the activities through the Great Base Management Unit, which practically conducts them. He can change the logistic picture during two principal moments: when he engages the resources and when the activity is completed.

The **Great Base Management Unit (UGGB)** is not an organic formation, but it consists of several unitary components, one for each sector of homogeneous capability/resources.

A Sector Assistant is in charge of each component.

In substance, the Tactical Controller:

- breaks up all logistic activities into elementary components, each corresponding to a type of resource concerning the activity;
- authorizes their execution, transferring the order, via computer, to the **Resource Assistants** (5). In this way, he modifies the logistic picture of the moment, since he employs certain resources which become unavailable for other uses.
- once received the confirmation that the activity is completed, he authorizes the update of the situation and releases the engaged resources, which become available again for their employment in subsequent actions, either at his level, according to the envisaged Plan, or at Operational Controller's level for further Planning/Programming. The mechanism described,

applied both within the Great Base and in the Theatre, guarantees the following main advantages:

- immediate verification of the feasibility of a logistic activity, be it scheduled or unexpected;
- timely and justified dispatch of requests of intervention and immediate allocation of the necessary resources, between the Support and Adherence Levels, and within the Adherence Level. Actually, a direct interaction in real time is assured between Support and Adherence.
- optimization of the employment of the available resources;
- uninterrupted update and control of the logistic situation;
- direct and constant coordination of the elementary components within an activity, and of the activities within a complex activity.
- in case of unforeseen events, immediate feedbacks to the Tactical Controller, for a corrective action on the activity under way, or to the Operational Controller, for the modification of the plans;
- simplification and standardization (also in informatics) of the logistic procedures, high flexibility of the system, both in the planning and in the conduct phases.
- simplicity of execution of the single components of even very complex activities by those in charge of the resources.

Fig. 8 shows the sequence of the main phases of the logistic process in outside-the-border operations.

At this point, it is possible to better specify how the discontinuity between Support and Adherence was eliminated. The entire logistic autonomy of the operation is controlled by Adherence (of the in-Theatre Commander), although it is mainly stationed on the national territory (6). With the **preventive transfer** of the logistic fly-wheel of support to Adherence, the fly-wheel is moved forward, very close to the

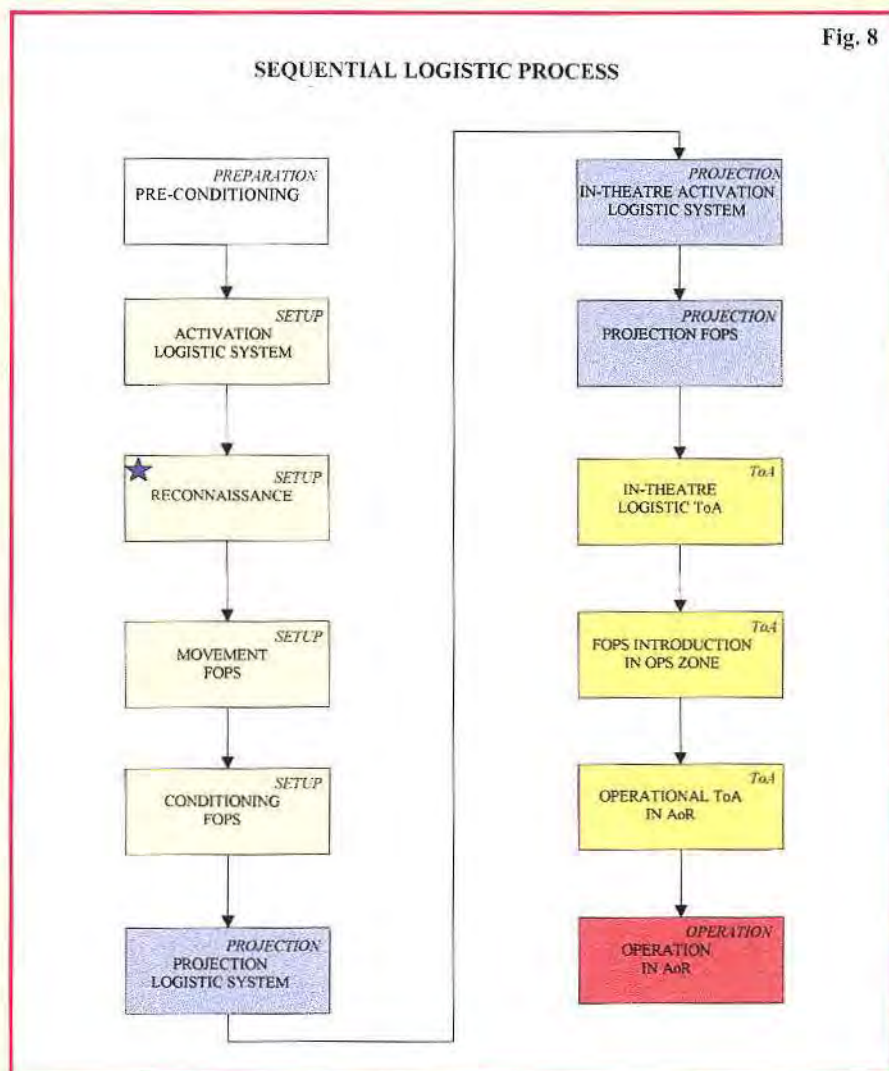


Fig. 8

forces, even if, physically, it is still on the national territory (in the Great Base). The times needed to bring to level the territorial organizations can be as long as we want, because they cease to affect the Adherence's Autonomy - which is constantly restored within the Great Base - but affect the autonomy of Support, responsible for the levelling within the Great Base. The support autonomy will have to be appropriately adjusted to the said times.

The FOPs Adherence Logistics avails itself of an Operations Room (ADERLOG-F) set up in field shelters, and practically guarantees the same functions performed by ADERLOG Great Base, with which it operates in close integration. Through

ADERLOG-F, which in operations takes on the role of «master», the in-Theatre Commander controls the whole Logistic System in support to his forces.

ADERLOG-F's Logistic Instrument, the real Adherence Logistics, consists of intervention modules capable of standard performances (**degree of intervention**), joined according to **their logistic activity** (for example, several maintenance standard-modules make up a **maintenance unit**).

When employed, these modules are associated in mono - or pluriactivity complexes, quantitatively and qualitatively adjusted to the specific requirements, and carry out standardized activities according to a pre-established programme, under

the guidance of ADERLOG-F's tactical controller:

The **operational users**, i.e. the units employable for adherence support, are Regiments or comparable units (7) mono-or multibranch, in the tactical configuration assumed on the field for a specific operation.

Fig. 9 shows the working scheme in the Area of Responsibility.

LOGISTIC ACTIVITIES' PROGRAMMING (8)

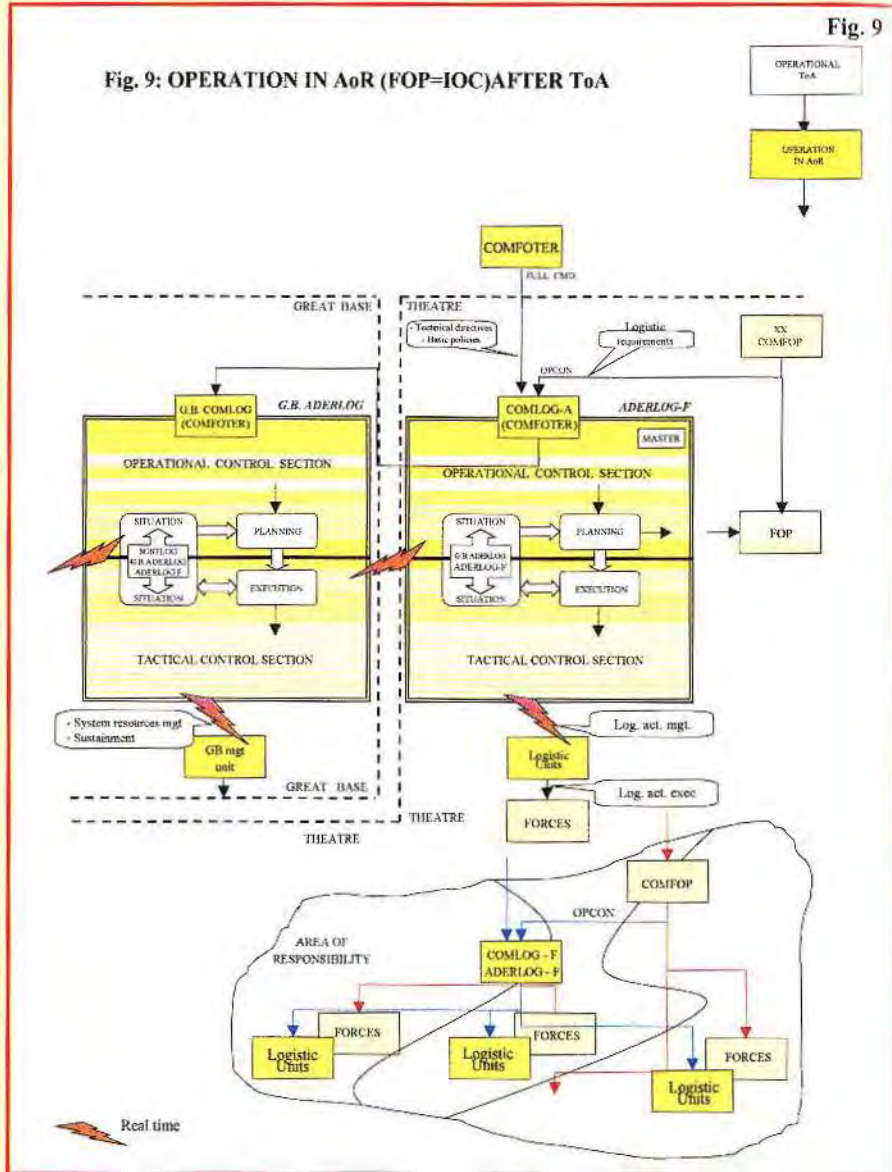
If the logistic flywheel (capabilities and resources) is well designed, within a certain period of time (autonomy) it will be «consumed» by the operational users, which in this way meet their needs in order to maintain their operativeness for that given period.

Therefore, considering that the flywheel must in any case reach the final consumer, each of its intermediate or final pause (supplies to the various organizational levels, including the consumer) is a default in the synchronization of the Logistic System and entails added costs (capital's tying up, stockage, maintenance, loading and unloading, aggravations on mobility, etc.) and efficiency losses as regards the support supplied.

This issue is not as irrelevant as it may seem, in fact it permits to understand that the main lever on which one should act in order to optimize the operation of the system is the **synchronization of the interventions of the Logistic System** with what the user requires for maintaining its operational capabilities.

On the other hand, the maintenance of the operational capability implies meeting:

- **fully predictable needs:** those concerning consumption, excluding spare parts;
- **needs related to full predictability:** those concerning repair interventions which can be traced back to the sphere of consumption, transforming the



corrective interventions into preventive ones (9);

- **needs deriving from logistic stress** (flow interruptions, conflict events, etc.).

As regards the first two groups of requirements, if the maintenance modules of the Adherence are proportioned, in terms of working capabilities, to the envisaged preventive interventions (and therefore there are no redundancies or deficiencies in the sector), the optimization of logistics can be reduced to a simple question of synchronization of the preventive supplies. A problem resolved in advance because the supplies can be

very well programmed, since they derive from perfectly foreseeable requirements. Consequently also the transport capabilities can be very easily estimated and therefore the problem gets an excellent solution. Obviously there are still the **needs deriving from logistic stress**. These must be specifically assessed each time and can lead to the constitution of capabilities/resources flywheels, that are not intrinsically necessary for the Logistic System's normal operation.

In connection with this, only as an example, one could say that the needs deriving from stress could be traced back to a problem of supplies, this time not preventive,

but urgent.

Reconsidering the structure of the Logistic System and in the quite acceptable assumption that the Transit Area does not constitute a stress source (10), there would be no advantage in placing the mentioned flywheel at the entrance points (in the Theatre) instead of the exits (i.e. in the Great Base). Pushing the flywheel ahead towards the Zone of Operations - with the relevant consequences - on the one side it would reduce the stress risks but only in relation to the time autonomy that the flywheel can grant to the FOP, while on the other, they would rise considerably, in relation to with the increased vulnerability of the resources.

In any case, if the «static» autonomy pre-positioned in the Operations Zone wore out and the stress persisted the problem would rise again.

What we mean is not only that the rapid delivery of urgent supplies from the Great Base allows to confer a lesser stress-risk autonomy to the Adherence, but, above all, that the real solution of the problem can be precisely in the Logistic System's ability to ensure a prompt delivery of supplies.

Of course the appropriate solution for the logistic risk must be studied each time according to the circumstances and the foreseeable conflicts, keeping in mind also the numerous opportunities that are offered in this regard by the possibility of multinational cooperation and employment of local resources.

With a view to the above considerations, the analytical development of the **Logistic Activities Programming** (which boils down in substance to programming maintenance and transport) can be defined by the following steps:

- assess the distribution of breakdown probabilities for each type of vehicle or system (one

can obtain the average values of incidence and the margins of variability);

- define the degree of intervention for the Adherence Logistics: on the basis of the times of execution and the concrete possibilities of adapting the equipment for field employment;
- evaluate the capabilities necessary for preventive interventions: one can derive the number and type of the standard maintenance modules that should be employed (instrument), the needs regarding the removal of unserviceable vehicles to the Great Base (transport) and, if the tactical requirements demand it, a segment of flywheel vehicles for each line of materials;
- define the programme of the maintenance activities: this is the first result of the development, and permits to assess the transport requirements for delivering spare parts;
- estimate the global requirements concerning supplies: it permits to define, considering the results of the preceding steps:
 - the Adherence logistic instrument = maintenance modules + transport modules;
 - Programmning of the Transport Activities = supplies + spare parts + removals.

THE SPECIALIZATION OF THE LOGISTIC ORGANIZATIONS

From the outlined **reference logistic concept** the foreground role played by the **Specialization of the Logistic Organs** stands out, both from the organizational point of view and from that of the performance required of the Logistic System.

The specialization of the Logistic Organs represents, at the same time, an assumption and an objective of the concept. The complexity of the support organization and the costs of its

deployment require in fact a marked professionalism of the men and units destined to operate in the logistic sector at all levels. Nevertheless one should envisage to graft on the technical knowledge of the specialized organs constant and healthy contribution of concrete experiences coming from operational activities.

To go into detail, the requirement of specialization in logistics, which reflects many of the concrete aspects connected with the application of the learning criterion, ought to be pursued, especially in the Executive Organs.

The **standard modules** are formed by permanent teams, whose capabilities of intervention are built and improved through a specific formative course for each member; individual and team training carried out also in terms of team competition; employment of standardized procedures of intervention (including the layout of the equipment), improved, first of all, by relying on the contribution (to be encouraged) of the operators; experience of intervention in operations; drawing up of post-activity reports and organization of seminars; constant technical updating.

The units specialized according to their activity are constituted, organizationally (11) and for employment (subdivision in operations) by several standard modules.

These are essentially **maintenance units** and **transport units**, besides the medical services, already configured according to their activity.

On the other hand, the solutions pointed out concerning the **C2 organization** and the **preventive interventions** have their strong point, for what concerns the actual possibilities of realizing them, precisely in the marked specialization of the Logistic Organs.

The professionalization/specialization of logistics substantially by ensures, all along the line, the presence, in

the organization of the units, of personnel of the Technical and Logistic Corps, also with the purpose of granting an adequate support to the Commanders by relieving them from the technical, administrative and bookkeeping activities related to the management.

In short, specialization is one of the most powerful levers for increasing the efficiency of the Logistic Systems, because it directly emphasizes the technical and functional performance of the organizational structure and in the meantime, indirectly, cuts its costs. Moreover, it helps, on the plane of the Command action at all levels, to give the Commanders the technical-administrative support necessary for them to concentrate attention and capabilities on the performance of their institutional operational tasks.

MULTINATIONAL LOGISTIC INTEGRATION

Prospectively, a remarkable potentiality of the **logistic concept** worked out is that of placing the Service in a position to take on among the other nations that participate in a multinational operation, the role of Lead Nation in the **conduct of the logistic support activities**. This promising development trend is suggested by the total consistency of this concept with NATO's logistic doctrine, by the envisaged location of the Great Base and by the concrete possibilities offered, also in a multinational operational context, by the specific management standards (of logistic capabilities and resources) designed within the framework of the command and control organization.

If the verifications in this regard, that are now being made, were to confirm such possibility, the Multinational Logistics Management Command could by itself constitute a complete capability package of the Service of its own particular value not only from the technical-military angle.

CONCLUSIONS

We have mentioned that the Reference Logistic Concept is not the arrival, but rather the starting point. Therefore, in concluding, it would be contradictory to sum up its characteristics which, besides, are in a continuous and progressive phase of development.

It is the case, instead, to outline some of the trends and possible effects of the concept on the other components of the Logistic Organization, about which nothing or very little was written in this article.

It is clear, first of all - and a lot has already been done in this regard - that the support on the national territory is ensured by a limited number of logistic formations of the Support Level, assembled in multifunctional bodies and by specialized, areal centres integrated through a wholly computerized Command and Control system.

As regards the **logistic capabilities** to be conferred to the Operational Forces, there would remain the resources typical of today's Regiment, albeit substantially reorganized, while significant changes could occur at the higher levels. The Brigade would lose the executive logistic organs currently at its disposal (logistic battalion and medical unit) which would be concentrated, after reorganization in a specialistic sense (maintenance battalions, transport battalions, etc.), at Intermediate Operational Command level.

The outline of the future operational logistics, which here deserves a specific, if summary, mention, will presumably reflect the features of non-linear operations and will be marked by very high flexibility and dynamism.

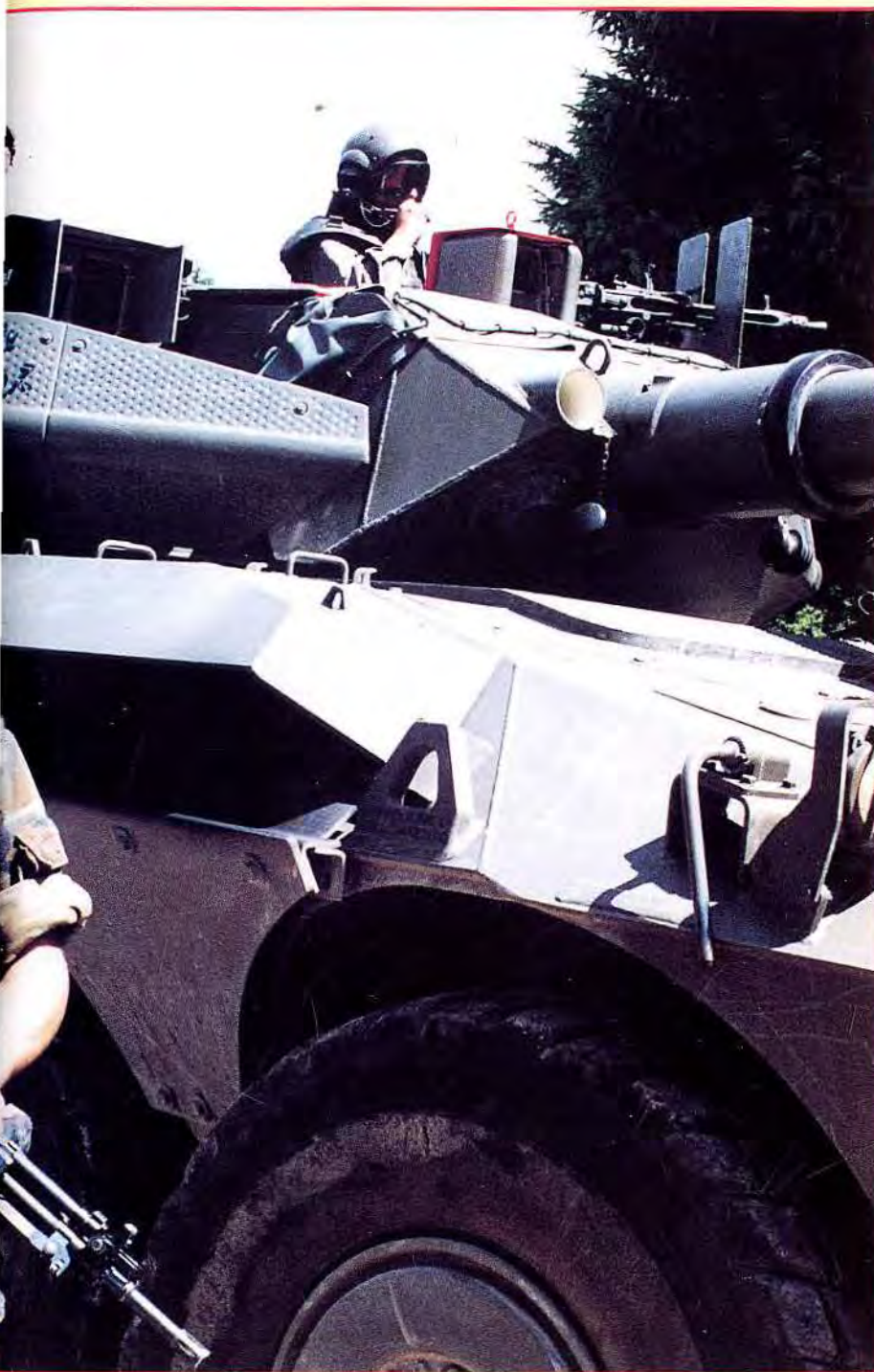
Its most qualifying points could be:

- transparence and visibility of the available logistic resources and capabilities, as well as of those needed from the garrison



to the areas of engagement, prerequisites for a maximum efficiency of support;

- superiority of the tactical mobility over the logistic mobility, and therefore the necessity to free the action of the forces from the burden and friction deriving from dragging along their own supports.
- dynamic planning of meeting



points for the forces and their respective supports in «reconditioning islands», variable and flexible according to the situation in progress, where one can carry out, with field equipment, the activities of supplying, replacement of unserviceable materials, force reconfiguration, etc.;

- real-time, close-network centralized control of the «islands» that contain the supplies and of the forces where the requirements are located, both in continuous movement and reciprocally and constantly transparent, in order to be able to programme «on the way» the location of the «meeting point» and the activities that

should be carried out in it, automatically and efficiently, when the meeting takes place. To prevent this meeting to become a case of vulnerability, it will have to be necessarily «quick and secret».

□

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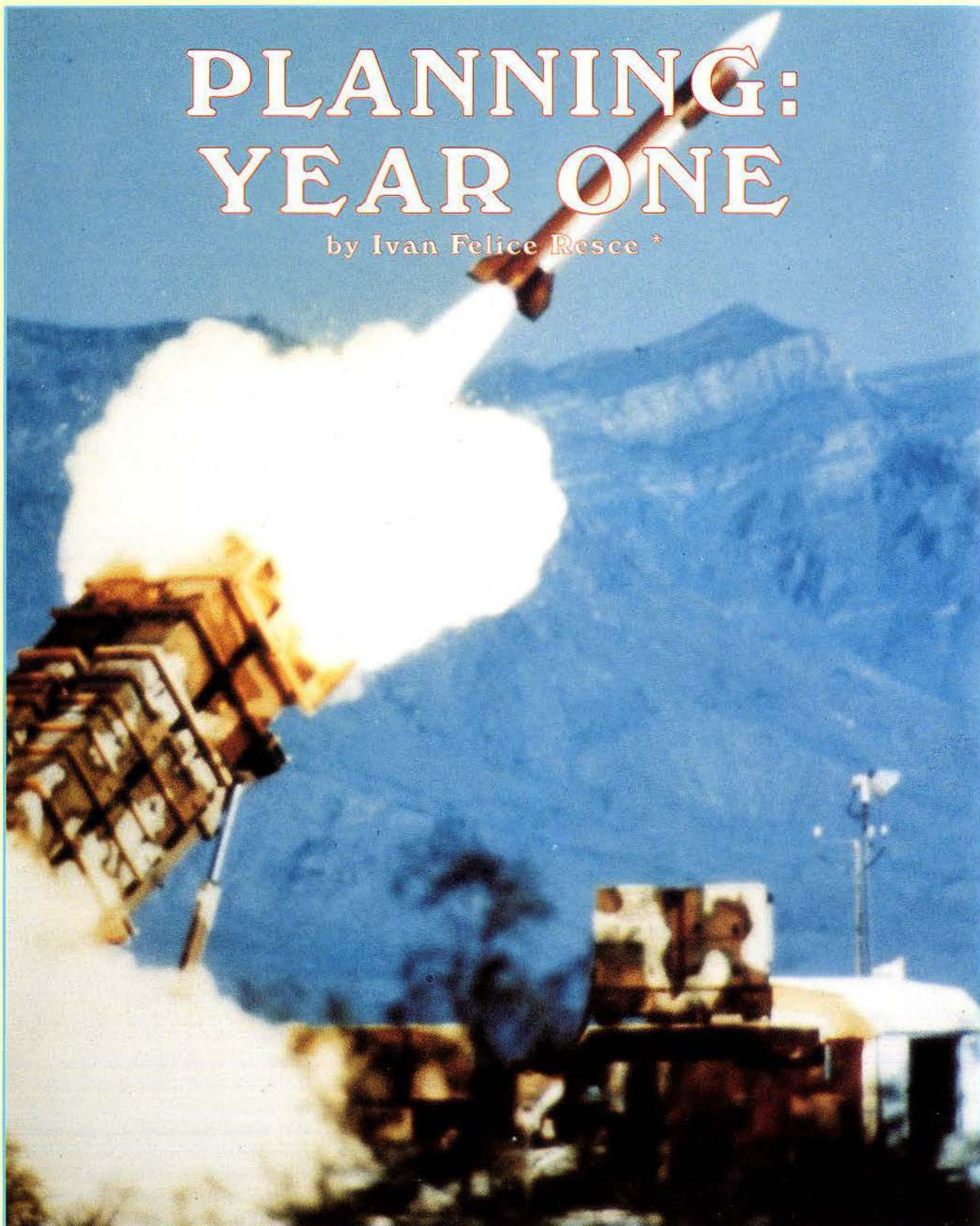
NOTES

- (1) Likewise, 1 or 2 operations can be conducted simultaneously.
- (2) If the Great Base cannot include all Exit Points (ports, airports, railway stations), these installations must be available in its immediate vicinity.
- (3) Obviously, the control supplies and stocks must be conducted in detail, considering not only their quantity, but also the types of material.
- (4) See note 3.
- (5) Each assistant receives both the detailed executive order relevant to the elementary-component/resource under his responsibility, and the general picture of the activity to which it belongs.
- (6) This permits a remarkable reduction of the burden of in-Theatre support, with no excessive psychological repercussions on COMFOP's sense of responsibility.
- (7) From the point of view of Adherence Logistic, a Command Post of Brigade/Division/Corps level is to be considered «Regiment equivalent».
- (8) In the planning context, the criteria of flexibility, scale and learning - pointed out at the beginning - find a particular application.
- (9) For instance, by programming the replacement of a part ahead of the average breaking time, envisaged on the basis of the data issued by the constructor or drawn from operational experience.
- (10) Otherwise it would be appropriate to include the Transit Area in the Operations Zone.
- (11) When stationed at a garrison on the national territory, the specialized units are established as battalions, therefore they have a battalion-level structure organization of their own.

ARMY PROJECT 2000

PLANNING: YEAR ONE

by Ivan Felice Resce *



BACKGROUND

The articles of the series «Army Project 2000», intended to provide a panoramic view both of the structures planned for the land military instrument and of its main functional components.

In particular, they presented a dynamic model of Army, which has to be adapted, perfected and brought up to-date according to the changes in the following basic parameters: scenarios, resources, technology. The planning cycle (Fig.1), formally started in the spring of 1997, is the instrument to adapt the model. Yet, though the model is dynamic, the objectives to pursue are clearly defined. The first objective is general and aims at transforming the Army from a mere defensive instrument - created to guarantee a credible deterrent in the Alliance context - into a dynamic system able to carry out the most diversified and complex missions of the modern scenarios. Since the world has ceased to be divided into two opposite blocks, the system of international relations has assigned to the Armed Forces in general, and to the Army in particular, the role of active protagonist, for the direct support of the national and international security policy and for the preventive and remote control of the conflicts.

In this context, the range of the force employment options is very varied. The operational scenarios are characterized by an increasing complexity.

Moreover, the theatre of operations has been almost completely projected outside the national territory. Finally, the employment contexts are becoming more and more joint and multinational and not only limited to the framework of the Alliance.

The modern Army therefore, has to cope daily with new operational realities and increasing multinational contexts. It must therefore become a qualified and reliable partner, whose

operational capabilities are fully integrated in its components; the Army must also guarantee the capability of a flexible integration of its components into task forces, usually joint and combined. From the general objective the specific one originates, which refers to its operational component, i.e. the organization of the forces by «capability packages».

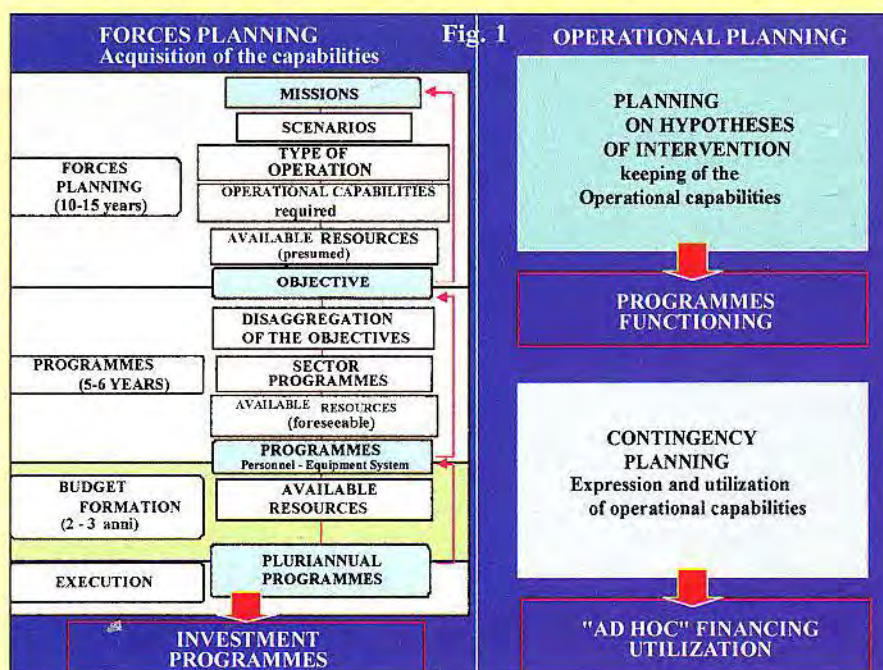
THE CAPABILITY PACKAGES

The «Capability Packages» are born with the intent of giving new shape to the Army, on the basis of the emerging operational necessities. It is essentially a new system of force planning, marking the passage from a structure based on the threat to a new one, founded on the capabilities. In the past, the force planning was aimed at maintaining the instrument coherent and effective vis-à-vis a specific and operational contingency. With the introduction of the Packages, the force planning aims now at building, into a predetermined framework of available resources, a flexible and versatile complex of capabilities, suitable for supporting various security needs, both of the Nation and of the international community.

The Packages are founded upon two fundamental principles: the first one is economy in terms of tactics, finance and organization of the formations; the second is the organization of the structure by modules, which is an essential condition for economy.

In particular, the Project also aims at the synergy of all the available resources towards the objectives corresponding to specific concrete capabilities (the partial objectives), which are coherent and integrable with each other. In this way, in short-, middle-and long-term horizons, the overall plan of the Army is carried out. This plan will be accomplished progressively and the single partial systems, once completed, will be operatively employable in every development stage of the program.

The «Capability Packages» are essentially the macro-objectives that the Army is determined to achieve, in connection with the great missions that it is institutionally called to accomplish. The «Capability Package for Projection» includes the forces destined to accomplish the tasks of dynamic security beyond the borders, in the framework of peace support and crisis management operations.





The «Capability Package for Reaction» is formed, in accordance with the engagements undertaken by Italy in the context interallied, by the units appointed to assure the deterrence, according to the new NATO strategy, based both on the presence of differentiated levels of operational capability, according to the function to be accomplished (Reaction Forces, Main Defence Forces, Reinforcements) and on the capability of immediate counterconcentration of the forces with the highest operational readiness (Reaction Forces).

The similarity of tasks and structures, and especially the need for the most drastic economy in every field, make the two packages to partially overlap (some units belong to both). They will become completely overlapped in the future, when, hopefully, there will be a greater number of volunteers.

The third Package concerns the «Capabilities for Control of the National Territory». It includes the units (completely manned by draftees) and the resources destined to the surveillance of borders, coasts and air space, to the intervention in case of calamities, to the support of Police Forces and Institutions, as

well as to the preparation of the capabilities for employment.

The last group of capabilities, the «Defence Package» includes the command and control structures and the logistic and tactical supports which are indispensable to connect and to employ, in unitary way, the whole land instrument in case of a large scale conflict; such hypothesis, though not very probable at present, cannot be definitively ruled out.

To define the Packages from the point of view of their quality, it has been necessary to divide the operations included in the various imaginable scenarios into their primary activities. In this way, it has been possible to define the «operational functions», whose basic categories are: «combat»; «combat support»; «intelligence»; «combat service support».

The command and control function is a connective web for all the others and could be defined as a «superfunction». It represents the intelligence, that is to say, the integrated whole of knowledge and rational creativity of the Army system.

From the point of view of quantity, every functional capability

component has been subdivided into modules, that is to say, units organized by standard rules.

Specific operational capability sets can be obtained through the aggregation of the functions by modules; such aggregation must be done in accordance with appropriate combinations suggested by the various employment options, pre-planned or contingent.

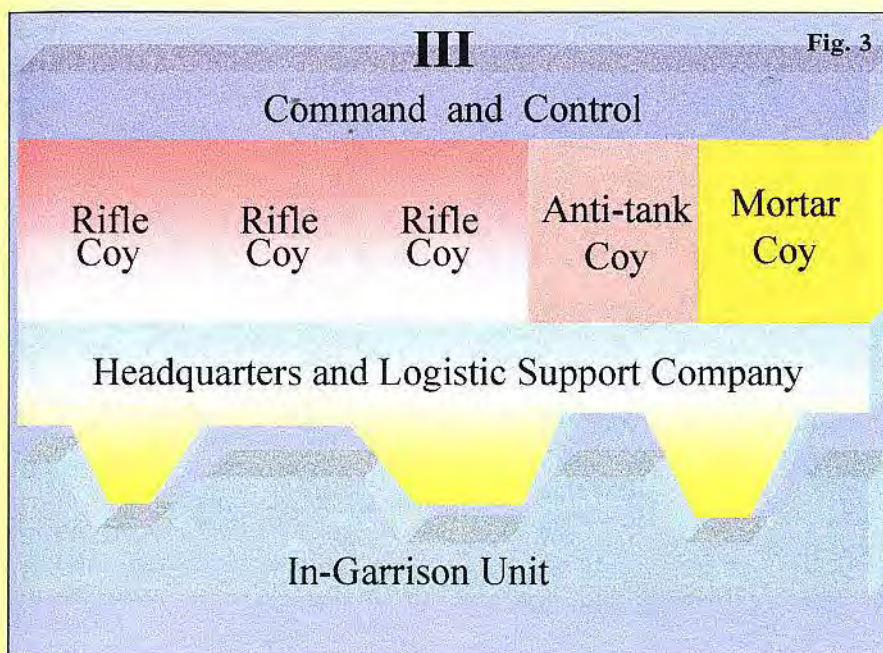
Each module corresponds to pre-determined elementary operational capabilities and is accompanied by its employment instructions, i.e. the standard planning. As in the well-known children's games, where a great number of complex constructions can be obtained from a set of very elementary standard pieces, in the same way, through an appropriate combination of the various elementary operational modules, it is possible to attain, automatically and efficiently, the task-force most suitable for the specific missions assigned.

This system, which requires a remarkable reorganization effort, gives the Army high flexibility and versatility, and contributes to define the integrability of the land instrument, in accordance with the guidelines formerly fixed.

In the context of the capability packages, the most immediate and qualifying objective is to prepare, in the medium term, a set of forces at least at division level, especially in view of the new definitive impulse of the European Union in the field of security: at least one Italian Division for Europe!

THE OPERATIONAL MODULES

The definition of the capability packages and of their functional components has led, as we said, to the specification of a dynamic model of the military instrument. The subsequent planning step is the re-shaping of the operational modules of the different functional components (manoeuvre forces, combat support, logistic support



etc.), on the basis of two essential criteria: the internal integration and the integrability into the sets of forces structured for the employment.

To fully understand these two apparently simple expressions we must note that the joint and combined operational structures, usually employed in modern scenarios, have a synergic effect compared with single-service and single-Nation systems, but only if the components are mutually compatible and integrable. When these conditions are not met, the use of joint and combined formations could penalize rather than increase the total effectiveness of the structure.

The above considerations highlight the need of assuring the integrability of the land instrument, both as a whole and in its partial configurations.

Based on these considerations, the planning work for 1998 has started with focusing on the revision process of the operational modules of the different functional components.

THE MANOEUVRE FORCES

As to the manoeuvre forces, the planning references have been

the scenarios, which propose employment options that, though very diversified, have a common denominator: the dispersal of the formations.

In this perspective, the manoeuvre forces are usually employed by operational islands, even very far from each other (Fig.2).

This is just one of the parameters used for the definition of the operational modules. Together with the others, it provides indications tending to solutions characterized by flexibility of employment, diffused leadership, internal cohesion, integrability within the operational systems which form the task forces for employment. The solution considered - still under examination - is based on the structuring of the regiment on a larger number of pawns, smaller than the present ones. Another fundamental requirement is the capability of being projected to employment scenarios within the national territory or abroad. To meet this requirement, the planned organization of the manoeuvre forces is of the «pre-arranged fracture» type.

The in-garrison unit (Fig.3), although of limited size, is structured to assume full responsibility of the management

of the infrastructure and related services, thus disengaging the Commander of the projected forces from the garrison responsibilities.

THE RECONNAISSANCE UNITS

Also for the reconnaissance units the reshaping process of the operational modules, started from the analysis of the scenarios (peace support operation and high-intensity operational engagements) and from the relevant main functions:

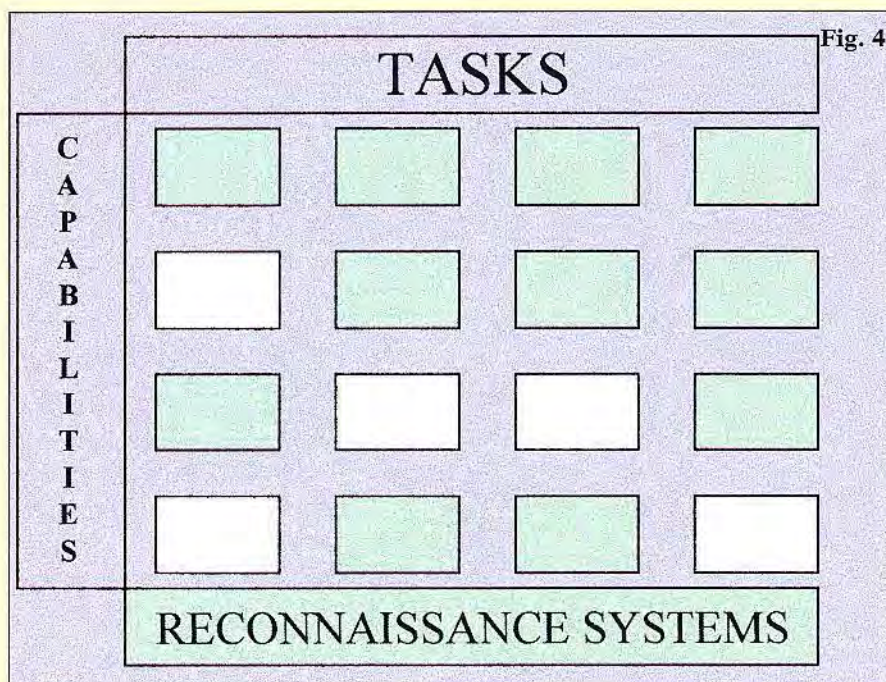
- reconnaissance, in its most important forms (by stealth and by force);
- control of routes and/or wide areas;
- convoy escort;
- preventive acquisition of sites and areas;
- typical peace keeping activities, similarly to the manoeuvre forces.

The planning activity focuses on the integration modalities of the different components (heavy armoured cars, light armoured cars, motorcycles etc) into «reconnaissance systems» adequate to the mission and set up according to a matrix layout (Fig.4). It is therefore possible to deduce the basic modules necessary to each system, defining, at the same time, their characteristics and dimensions. The reconnaissance systems must be integrable within the RSTA function (Reconnaissance, Intelligence, Target Acquisition), with the capabilities provided by other units (Army Aviation, SORAO, etc.).

THE LAND ARTILLERY

Artillery is probably the functional component most suitable for the explanation of the «system» concept, which inspires most of the planning work for force employment.

Also in modern scenarios, artillery continues to be an essential component of the



«manoeuvre». If this statement appears to be evident as regards high-intensity operations, it could cause some perplexities when related to PSOs. Nevertheless, if one considers the requirements necessary to succeed in the specific kind of operations (agreement of the parties, impartiality and credibility of the intervention force), the role of artillery comes out fully, even in terms of simple deterrent presence.

In any case, the employment of the modern artillery is characterized by:

- timeliness, since the dynamism of the action makes tardy interventions absolutely useless;
- accuracy, in order to hit the selected targets, save ammunition, pursue the safety of the formations (fire and disappear) and, finally, to avoid collateral effects, particularly unacceptable in PSOs;
- fire effectiveness, to achieve the effects expected in relation to the kind of target.

To meet all these fundamental requirements at the same time, it is necessary to structure the artillery as a system (Fig.5). Such system should assure the exact identification of the targets; the immediate and secure transmission

of the request of intervention; the activation in real time of the command and control chain; the timely, careful and effective distribution of fire. The search for the most efficient organization for the artillery system is the main objective of the current studies.

THE ENGINEER CORPS

As to the Engineer Corps, a different methodology of approach has been followed. It is not easy to apply the concept of «system» to an element which includes a wide range of tasks and, consequently, a range of specialistic units just as wide. The basic principles have therefore been the organizational flexibility for employment (structure by modules) and high specialization (or plurispecialization) of the capabilities. The synthesis of these two principles present two main aspects:

- the centralization of «capabilities» at regiment level; due to exigencies connected with the peculiar speciality («Folgore» Brigade) or with the geographical situation («Sassari» Brigade), only these two Brigades will maintain a company-size element of the

Engineer Corps.

- the subdivision of the regiments into two categories, concerning respectively the direct support and the general support of the manoeuvre forces.

The regiment, in fact, represents an organization level able to efficiently assure both the readiness and the coordinate employment of the same capabilities. The two categories of units (general support and direct support) differ both for the specialistic capabilities and for their employment. The direct support units have more tactical features, whereas the general support is essentially technical. As to the employment, the direct-support regiments may also create two command and control structures able to manage, in a coordinate and complete way, the different modules to be assembled according to the reference scenario. The general-support regiments, on the other hand, though organized to operate in a unitary way, are usually reserves of specialistic capabilities that may find their place within direct support task forces (Fig.6).

The structure so conceived answers the need of assuring a command and control organization at battalion level to each Brigade engaged in operations, be they Peace Support or conventional, for the co-ordinated employment of the specialistic capabilities, both tactical and technical, indispensable to efficiently support the manoeuvre forces.

ADHERENCE LOGISTICS

The logistic support capabilities of the regiments, located at the «Headquarters and logistic support companies» (the present denomination is «Headquarters and Services Company») have been reviewed in a unitary way.

The new logistics of the regiment depends on specialists who manage, in a coordinate way, all

the activities related to the particular branch and are fully responsible to the Commander of the unit.

The Headquarters and Services Company includes therefore a C3 component (Command, Control and Communication) and a logistic support component, based on three specialistic elements (medical, quartermaster, ordnance and transport). Qualified and specialized personnel are in charge of these components.

The regimental logistics have been organized into the general context of Adherence Logistics (1).

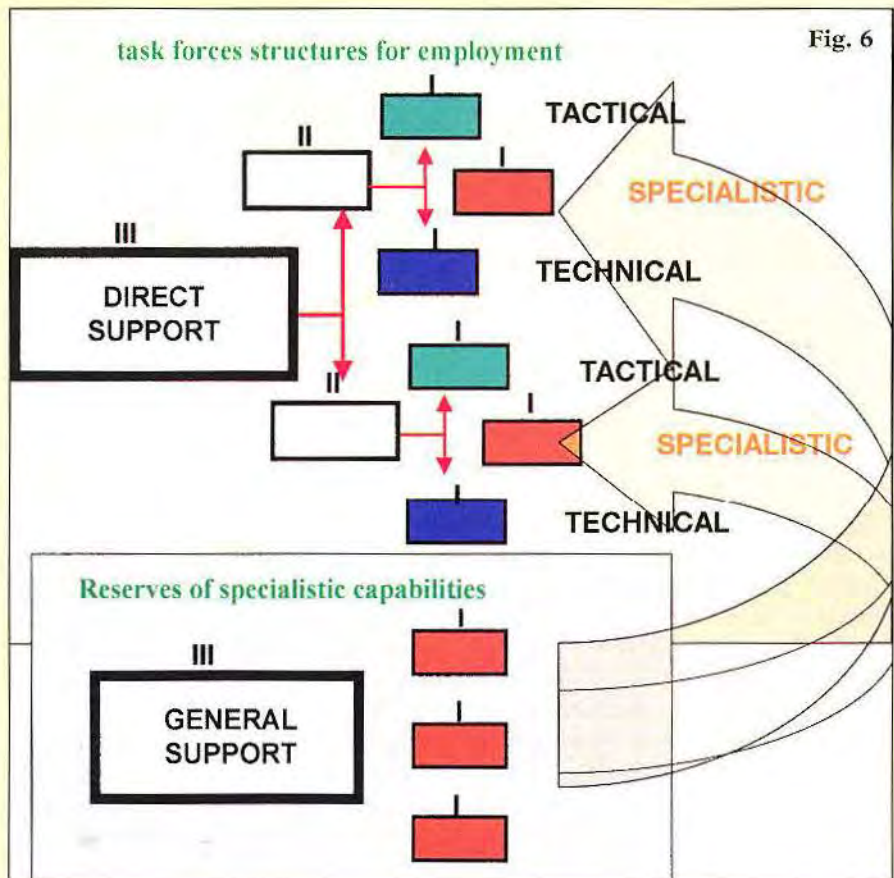
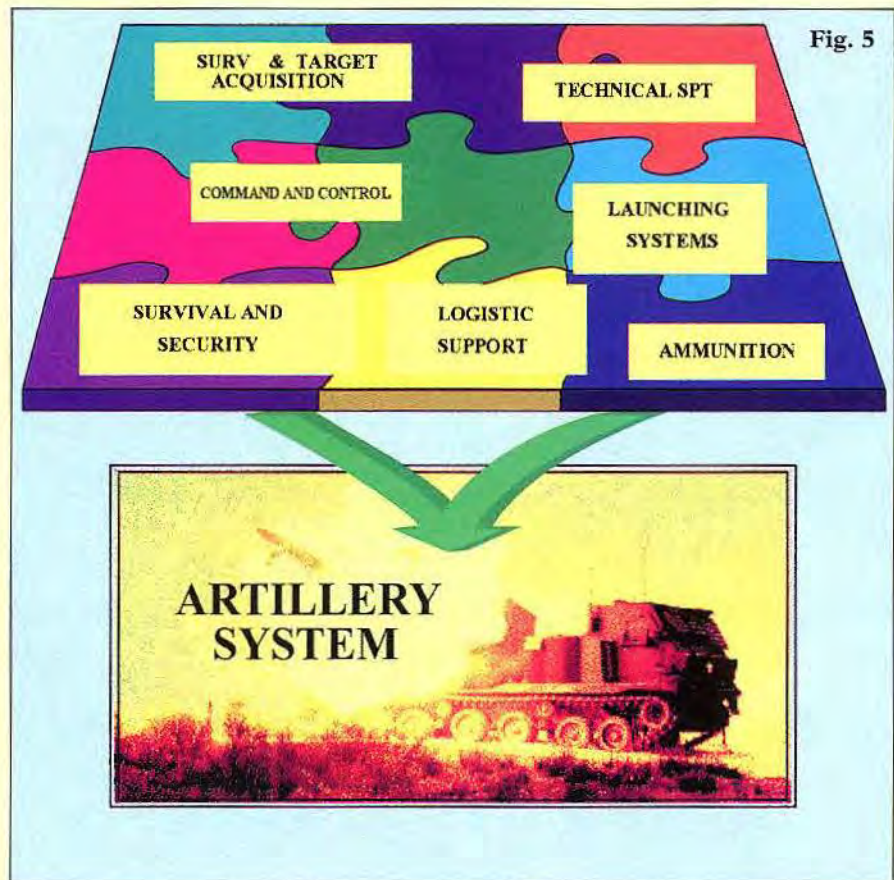
The study's objectives were:

- to adapt the logistic support as a whole to the requirements arising from modern operations;
- to simplify and optimize the resources, in order to reach a balance, also quantitative, among the different functional components;
- to make the instrument, its structural organization and the national procedures fully compatible with the NATO norms.

The research represents a development, in term of realization, of the reference logistic concept worked out in the context of the Capability Packages (2). The careful examination of the latest operational experiences (lessons learned) had evidenced some deficiencies of the logistic support, that can be summarily referred to:

- a residual gravitation towards the North-East of the «mentality» and of the available resources;
- a certain functional discontinuity between the Strategic Support Level and the Adherence-Logistics Level;
- a performance below the expectations, vis-à-vis a remarkably onerous logistic system.

The new logistic concept intended to coherently meet the exigency of restructuring an instrument whose configuration was still static and





anchored to the national territory and to a precise threat, and had to be resolutely oriented towards the projection and support of forces in operations outside the borders. The concept also marks the passage from a logistics based on requirements with onerous and unused accumulations of materials and capabilities to a logistics based on preventive planning and on activities developed by centralized agencies in favour of the users.

The essential elements of the concept are:

- the establishment of the «Great Base», tasked with the sustenance of the Forces' projection abroad and their supply in operations;
- the Command and Control Organization, which is the real

essence of the working system of the Great Base and of Adherence Logistics in the Operations Area. The Command and Control Organization is based on the centralization of control and management of resources;

- the Logistic Activities Programme, based on the logistic responsibility of the Higher Command (in an innovative meaning of the principle of «home delivery» logistics) and on the development of essentially preventive interventions;
- the Specialization of the Logistic Organizations which represents, at the same time, the assumption and the objective of the concept; in fact, the complexity of the support organization and the cost of its deployment impose a highly

professional specialization of the men and units charged with the logistics' operation at all levels.

In prospect, the «logistic concept» worked out has an important potentiality: to make the Army able to assume the role of «lead Nation» for the management of the logistic support activities vis-à-vis the other Nations participating in a multinational operation. This promising trend of development is suggested by the full compatibility of the concept with the NATO logistic doctrine, by the envisaged location of the Great Base and by the concrete possibilities offered, also in a multinational context, by the specific management modalities (of capabilities and logistic resources) within the new command and control organization.

		REQUIREMENTS/ALLOCATION OF CAPABILITIES GARRISON CAPABILITIES: X PROJECTABLE CAPABILITIES: XX					
CAPABILITIES		SUPPORT		ADHERENCE			
		LOGISTIC INSPECTORATE	LOGISTIC AREA COMMAND	LAND FORCES	INTERMEDIATE OPERATIONAL COMMAND	BRIGADE	REGIMEN
C4		X (XX)	X	XX	XX	XX	XX
C2 SUPPORT		X	X	XX	XX	XX	XX
LOGISTICS OF PERSONNEL	Medical Service	X (XX)			XX		XX
	Accounting	X (XX)	X	X	XX	XX	XX
	Food supplies	XX	XX				XX
	Clothing	X	X		XX	XX	XX
	Barracks Assets	X	X		X	X	X
	Mobile Equipment		XX		X		X
LOGISTICS OF THE EQUIPMENT	Preventive Interventios	X	X		XX		XX
	Replacement	XX	X		XX		
	Corrective Interventios	X	X		XX		XX
	Recoveries		X	X	X		X
LOGISTICS OF MATERIALS	Class (NATO) I		X		XX	XX	XX
	Class (NATO) II	X	X		XX	XX	XX
	Class (NATO) III		X		XX	XX	XX
	Class (NATO) IIII	X			XX		XX
	Class (NATO) IV		X		XX		
	Class (NATO) V		X		XX	XX	XX
LOGISTICS OF TRASPORTATIONS	Transfers	XX	X	XX	XX	XX	XX
	Domestic Transfers	X	X	XX	XX	XX	XX
	External Transfers	XX		XX	XX	XX	XX
	Domestic Logistic Support	X	X		XX	XX	XX
	External Transfers	X	X	XX	XX	XX	XX
ENGINEER WORKS		Housing	XX	XX	XX	XX	XX
CONTRACTS		X (XX)	X		XX	XX	XX

The development, in practical terms, of the logistic reference concept, has led to the integration of the logistic capabilities into real «logistic systems», i.e. organized sets of procedures, personnel, equipment and resources aimed at supporting specific missions. Having examined the systems, it has been possible to define the logistic capabilities that must be assured at the different organization levels. This is briefly summed up by the table above.

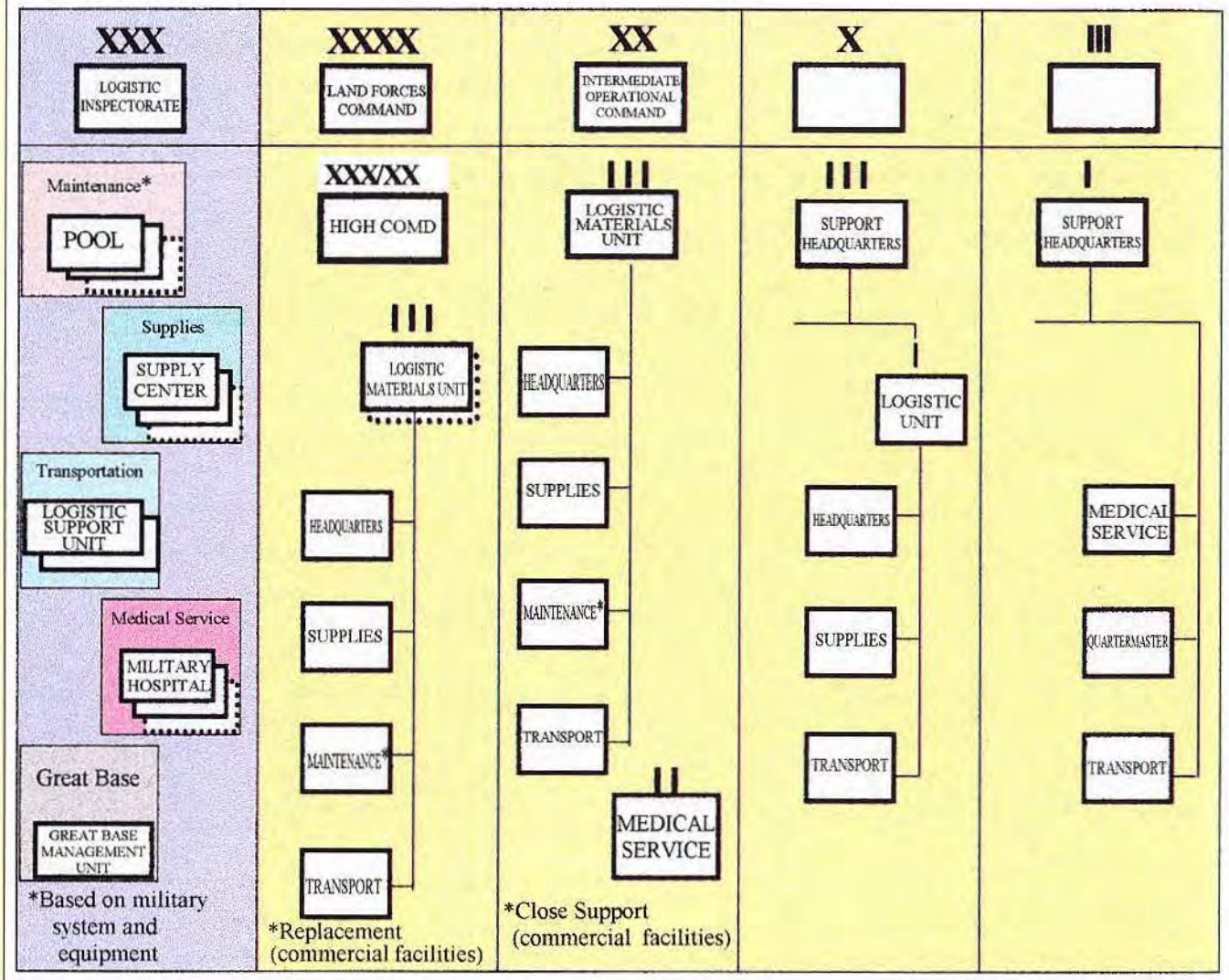
A fundamental step for the identification of the logistic capabilities was the definition of the organizational principles which are the bases of adherence logistics:

- operation-oriented system: adherence logistics is prevalently oriented to the operations. When in garrison, the resort to goods and services available on the market should be preferred (food supplies equipment-and-infrastructure maintenance etc.);

- centralization of the capabilities: it represents the answer to the progressive contraction of the operational instrument, in order to pursue the functional balance among the different components;
- configuration by modules and specialization: it is an indispensable premise for the accomplishment of the task-organization concept. It also allows to accurately fit the instrument to the operational requirement, without gaps or

LOGISTIC INSTRUMENT LAYOUT BY BLOCKS

Fig. 7



redundancies;

- coincidence of the responsibility with the technical competence and availability of the required resources: the Commanders must regain their role and their freedom of action, in order to accomplish their institutional task, i.e. the readiness and employment of their instrument;
- flexibility and simplicity of the procedures: the wide range of operational engagements and the impossibility of allotting specific resources to each of them, compel to adopt flexible procedures, easily adaptable to

contingent situations.

After summing up the essential principles of the adherence logistics organization, the logistic instrument at the various levels has been schematized by functional blocks, as shown at Fig.7.

In short, we can say that while the logistic capabilities of the regiment remain substantially unchanged, even if reorganized and developed in some fields (medical service, maintenance) the higher levels, on the contrary, will undergo important changes. The Brigade maintains or even strengthens its command and control capabilities

in the logistic field, but reduces, at the same time, the executive logistic components which are now limited to supply-management and transport, grouped in the command and logistic support regiment (formerly headquarters command and tactical support) unit. The executive capabilities «removed» from the Brigade, are centralized at Intermediate Operational Command and at Land Forces Command (COMFOTER) level.

The presence at all levels of Technical and Logistic Corps personnel in the units is substantially strengthened, within the framework



of professionalization/specialization of logistics. This aims also at assuring an adequate support to the Commanders, disengaging them from the managerial technical-administrative-accounting activities.

Within this framework, the revision process of the procedures relevant to administration, food supplies, equipment-and-systems maintenance, modernization and management of the infrastructure, has not been less significant. These activities are essentially logistic, but they can have a crucial influence on the overall operational capability. The process is carried out according to the existing rules; it aims at achieving simplification and effectiveness, also through the assignment of responsibilities to those who have the skills and the capability to assume them.

Support on the national territory is assured by a small number of

logistic formations, grouped in supply organizations and specialized maintenance poles, with areal competence, integrated through a fully computerized Command and Control system. The logistic systems in support of the operations are put into action by the capabilities described above.

PLANNING PROSPECTS

With these brief remarks, we intended to provide a general description of the planning objectives related to the current activities. These objectives aim at carrying into effect what has been planned in 1997 and, especially, at the setting up of the «Army System» in its new shape as an integrate and integrable instrument. In this perspective, having defined the operational

modules and checked their internal coherence, it is necessary to pursue the functional and quantitative balances among the different functional components, as well as their integration into the multifunctional operational aggregates. The following step is to give to these «aggregates», both national and single-service, the characteristic of full integrability in joint and combined task-forces.

The primary objective for 1999 is to set up an organization able to address and to support the Army on the way to its full - joint and multinational integrability.

The formulation of a specific project aiming at the creation of an Authority for Doctrine, Development, Procedures and Training (similar to TRADOC) has therefore been started. This authority will have, in a unitary way, the responsibility of the mentioned subjects, as well as the



the available resources and the possibility of overcoming the bonds and restrictions that at the present time give rigidity to the «Army System». It is sufficient to cite a single example: the procurement procedures for the systems, still too long and complicated.

CONCLUSIONS

By starting this planning process, the conceptual trend connected with the so-called «Gorizia threshold» has been definitively abandoned. The security of the individual Countries moves from the restricted national environment to the collective one, fully in line with «globalization», which concerns now every sector of interest in modern societies. This new perspective puts the Armed Forces, and consequently the Army, in front of a new and wider responsibility: to qualify as a reliable and competent partner in the joint and multinational context. One of the specific objectives of the capability packages, a «Division for Europe», is part of this undertaking. The meaning of this expression goes well beyond the usual definition of «Division», both in terms of quality and quantity. In fact, this expression implies the acquisition of the

responsibility for Applied Operational Research and for Simulation in support of planning and decisions.

In the same context, it will also be necessary to give new shape to the school-and-training component, with a twofold objective: on the one hand, the effectiveness in terms of training and, on the other, the sustainability, in relation to the resources and the dimensions of the operational component, of which the school/training component is the most qualified support.

In particular, the Authority should systematize the generation of the fundamental requirements of the land forces - the capabilities - in the various operation and cooperation environments.

This process, to be carried out in the appropriate international forums, starts by the definition of the scenarios, followed by the elaboration of the operational concepts, in this way, the so-called «Lessons Learned Cycle» is put in motion and sustained.

The last phase of the process, which has a cyclical and self-correcting feature, is the definition of the forces' requirements, with reference to the six fundamental qualification areas of the Service (man, doctrine, leadership, materials, force structure, training).

The Authority in question should represent the focal point of a check and validation system of capabilities and units, as a premise for their organic homologation and introduction in operations.

The fundamental objectives, relevant to the instrument's internal integration and integrability in joint and multinational contexts, though clearly defined in terms of concepts and organization, still require remarkable efforts for their achievement.

The results will depend on both



capability of projecting a complex of forces and assuring its support in case of long-term operations; a formation shaped in relation to task and scenario, structured on a Command at division level, two Brigades and the essential tactical and logistic support. In substance, it is necessary to provide contributions qualitatively and quantitatively equal to the ones of the main European partners, in order to share the responsibilities and the advantages of common security on a plane of equal dignity. Borrowing the slogan of an effective commercial, we can say that the planning process must turn a «Large Army» into a «Great Army». An Army structured for deterrence and with potential capabilities (to be completed, in case of emergency, through a complicated mobilization process), must produce an instrument ready for the real employment, on the basis of even long-term operational cycles. The complex of forces must essentially allow the alternation of several contingents, adapted to the particular need and fully integrable within joint and multinational formations. In the global picture outlined, a substantial clarity of aims and targets is inevitably in contrast with the uncertainty of the results. At this point, it is necessary to take into



consideration the principle of graduality in the realization of complete capabilities, ready for employment. This concept is typical of the organization of the operational component by capability packages.

On these bases, at present the Italian Army has an actual projection capability of a two-Brigade divisional complex, for the employment out of area and with the possibility of partial turnovers.

As far as we can foresee today, the «projection package» objective

and the one concerning the related logistic Great Base - which will ensure the sustainability of the efforts for several operational cycles, through the rotation of the forces - will be fully achieved by the year 2000.

□

**Brigadier General,
Chief, Working Group
Army General Staff*



NOTES:

(1) The Adherence Logistic, provided by the elements directly included in the operational components, in the multinational environment assumes the denomination of Combat Service Support.

The Support Logistics is provided by the Logistic organization subordinate to the Logistic Inspector; in the international environment it normally assumes the denomination of Strategic Support.

(2) On this the subject, see the article by Lieut. Col. Sauro Baistrocchi, published in the present issue.

ARMY PROJECT 2000

EVOLUTIONARY TRENDS OF THE CAPABILITY PACKAGES

POST-2010 SCENARIOS OF EMPLOYMENT
IDEAS AND REFLECTIONS
FOR THE FORCES' DEVELOPMENT

by Sauro Baistrocchi *

The notes on which this article is centred are based on the studies carried out by the Army General Staff, and have the purpose of outlining, with reference to post-2010 probable scenarios, some possible directions for an in-depth study of the long-term development of the national land forces.

After an outline of the analytical part of the issue, the main conclusions will be discussed, keeping in mind that many of the elements referred to are still simple points for reflection.

THE SCENARIOS

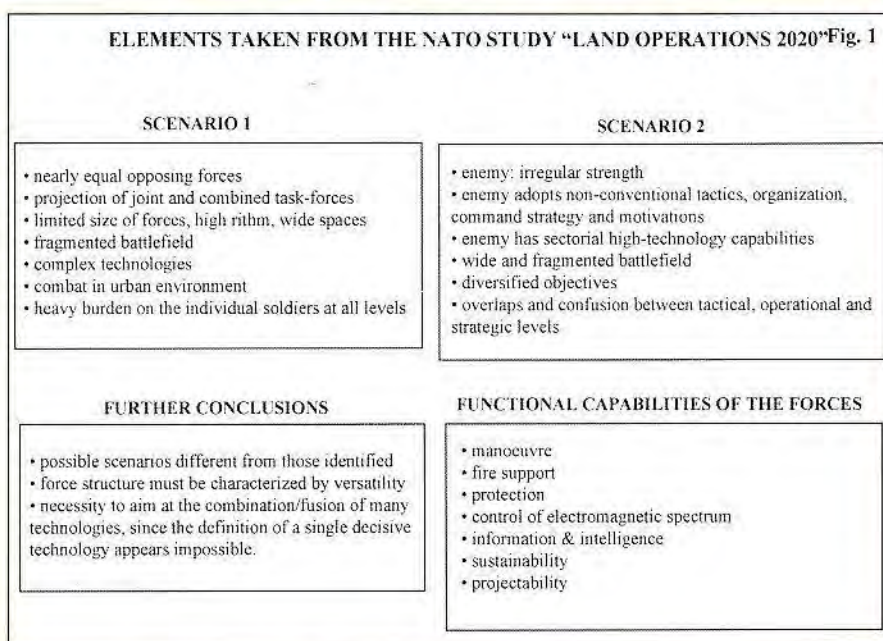
The long-term scenarios envisaged, on whose rationale it is impossible to dwell here, tend to converge - in most of the current, national and international studies - on three main types of conflicts:

- conventional conflict between forces with practically equal capabilities;
- asymmetric conflict between forces with various and diversified degrees of capability;
- other-than-war operations (OOTW), particularly peace-support operations.

In this regard, many of the conclusions reached so far by the NATO study «Land Operations 2020», summarized at fig.1, are generally acceptable.

With a view to this, some of the aspects that seem to better characterize the new employment scenario are the following:

- prevalent and persistent recourse to the preventive and remote management of crises, by employing multinational and joint formations of relatively limited size in operations outside the national borders;
- great number, different characteristics and unpredictability of the possible operational options; probable asymmetry of the contenders;
- influence of the urban environment;



- irregular form of the assigned area of responsibility, and its extent vis-à-vis the available forces;
- a multidimensional battlefield, which includes not only the extended third dimension (space) but also the electromagnetic environment;
- interconnections and overlaps among the tactical, operational and strategic levels, whose contours tend to fade and assume irregular features, particularly during the conduct phase;
- growing significance of the single soldier, who is taking on the characteristics of an individual operational platform;
- restraints and limits deriving from public opinion, mass media, political power, also with reference to the safeguard of the natural environment;
- fundamental importance of logistics, whose importance tends to extend well beyond its traditional functions.

However, although the Western World can do a lot, in order for reality to confirm predictions one should be well aware that the present geostrategic scenarios, unlike the static scenarios of the past, are marked by high dynamism and fortuity. Unexpected

events, like those occurred during the last decade, can upset assumptions and nullify the solutions that have been found.

In view of this, the Army Staff plans to define the future scenarios of employment summarized above on the basis of three characteristics: uncertainty, complexity, sensitivity; characteristics which effectively describe, albeit in general terms, the difficulties intrinsic in the challenges that the Army is called to meet in the future.

On the other hand, as regards resources, despite the various and multiform hypotheses that can be advanced about the requirements, the Italian military planner cannot count on wide manoeuvring margins. The foreseeable trend of the available resources in fact envisages substantial cuts in personnel and essential stability of the actual budget appropriations. Considering this, the possible short-medium-term progressive decrease in the conscript component, even now operationally employable only with many limitations, gains particular importance.

Among the many influences, it is interesting to consider the significant inertial component endogenous to our Service's present organizational structure, which is



apparent on the concrete plane mainly as conceptual fracture between present and future. The dynamic, logic and programmatic continuity of the development of concepts and structures appears to be a necessary precondition for an effective force planning. In every considered historical moment along the path of development, the Army structure should actually configure the achievement of a complete planning/programming objective, capable of expressing a well-defined complex of integrated and synergic operational capabilities, fundamentally adequate to meet the current requirements.

THE COMPETITIVE ADVANTAGE

In defining the key factors for the development of the forces, the predominant approach in the Western world considers technological superiority the main strategic advantage in the competition with the potential adversaries. The maintenance, and

possibly the enlargement, of today's technological gap are preconditions for exerting on effective deterrence and, if necessary, for a successful employment of force, also against Nations that can deploy a quantitatively overwhelming strength as compared with the numerically limited - in relative terms - manpower of the West.

The NATO study now under way, Land Operations 2020, appears to substantiate this approach.

It cannot be denied that the technological content is a factor destined to characterize the national instrument of the future.

Taking a more comprehensive glance at conceptually wider horizons, one is led to believe that the quest for possible competitive advantages passes first of all through structural innovations and only secondly through technological advances. The latter are necessarily subject to the specific requirements of the structure, also considering the costs, often very high, entailed by its implementation.

It must also be emphasized that,

in the mentioned context, one should attribute to the «structure» term a very ample meaning, related to systems and not only to organizations.

A structure is a body with set goals, constituted by men who have at their disposal relational concepts and procedures as well as working tools.

The structural innovation therefore consists in defining suitable organizational concepts, but its unavoidable precondition is the qualitative improvement of the human component.

THE LOGICAL PROCESS FOR DEFINING THE DEVELOPMENT PATH

In short, the force planning approach for the future scenarios that the Italian Army is exploring has as its general objective that of maximizing the effectiveness of a military instrument of limited quantitative dimensions as compared to complex operational requirements, only partially foreseeable and, in any case, variable in time and space. This general objective is split in partial objectives, coherent with it, complete from the operational viewpoint and suitably placed in a time perspective. On their turn, the partial objectives are expressed in terms of acquirable capabilities.

At this point of our considerations, the straightforward simplicity of the preceding assertions seems destined to collide with reality. Actually, considering the scenarios of employment, the peculiarities that distinguish them - uncertainly, complexity, sensitiveness - and the negative influences exerted by the available resources and the confused administrative procedures concerning their use, the problem of acquiring capabilities seems really to lack any form of acceptable, cost-effective solution.

This obstacle could possibly be overcome using the following reasoning process:

- an intellectually and structurally

versatile instrument, i.e. able to reshape itself rapidly for different needs, is on principle better than an Army that prepares in advance a range - as wide as may be, but fixed - of employment options;

- the optimal performance in the preparation phase and the operational success depend essentially on the intelligence of the structure as a whole, i.e. on the ability of the structure itself to prepare and govern, with rationality and according to its institutional ends, the activities which it is called to conduct;
- the maximization of the structure's intelligence is obtained by dynamically pursuing, on the one hand, the integration of the executive capabilities, essentially specialized and related to the material and connected operators and, on the other, the synergism, at all levels, of the typically and exclusively human capabilities;
- there is then a core capability that precedes and dominates all others. It is the instrument's capability to change its functional and operational organization according to the specific need;
- this core capability must be acquired as a priority, because it is the one and only that can ensure the growth of the Army. The core capability is attained essentially through structural improvements, meaning by «structure» the whole of men and rules which guides individual and group activities. In strictly military terms, the core capability coincides with the generalized command and control core-function, i.e. extended to operational employment as well as to the force preparation activities;
- the best general organization formula for achieving the mentioned goals is the matrix, i.e., in evolutionary terms, the net, because it emphasizes the task-oriented flexibility of the structure, ensures the optimal



employment of the specialized resources and spurs the versatility and creativity of the human component. This requires a high qualification of the personnel and implies a modularity of the structure at all levels.

THE NETWORK STRUCTURES

The network organization structures, as the name indicates, are represented (fig.2) by a number (that may be high) of knots, interconnected by links. In general, the knots (user points) are not arranged in advance according to a preestablished relational hierarchy, which is instead dynamically defined according to the specific tasks.

The mentioned structures tend to borrow the characteristics of electric-power, telecommunications and computer networks, i.e. ubiquity and reversibility.

Ubiquity consists of the possibility to use in each knot of the net all the «energy» available in

the entire structure. The structure is therefore not localized, but distributed through space, in a range of points with equivalent capabilities, nor can it be localized on the vulnerability plane.

Reversibility consists not only of the possibility of dynamically ranging the knots, but also of the fact that the current use of the energy does not affect the total potential available, which is continually reconstituted by the network itself.

The «energy» of the network's organizational structures is made up by two fundamental types of resources: information and control.

While information (shared «planning and programming» resource) is usually constantly available in every knot, control (executive authority) is released according to a task-oriented logic. By releasing degrees of control in the network one defines the hierarchical relations of the knots.

The network structure is often deemed reductive, for it is a technological system subject to a

structure with a random organization or with no organization at all.

Actually the effective possibilities of this concept emerge only after its full application to the functioning principles of the organizational structure itself.

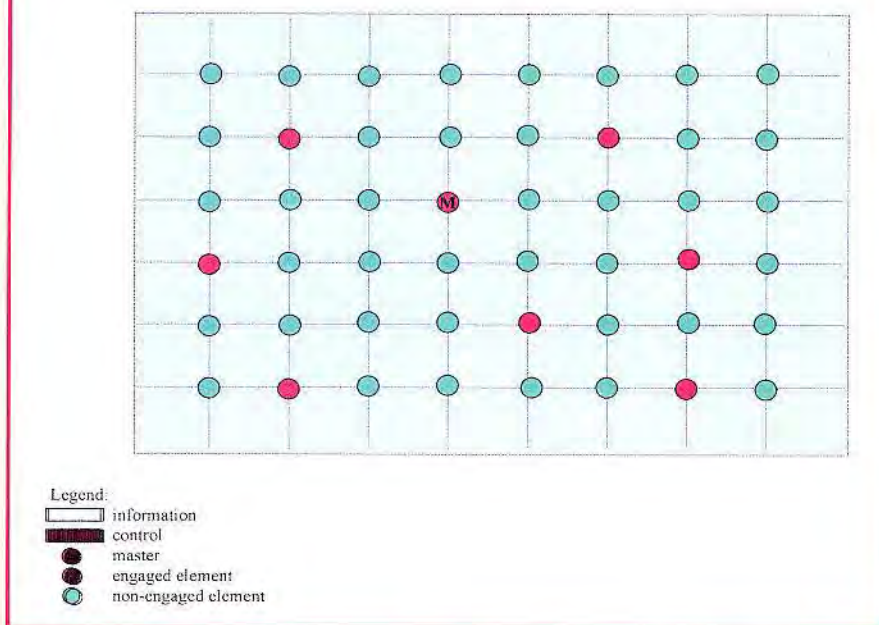
The matrix/network organizational structure permits to dynamically manage complex situations marked by uncertainty and variability, optimizing meanwhile the employment of the scarce resources. Nevertheless, this structure is difficult to govern, especially as regards the typically military requirements of the hierarchical line.

In order to ensure the structure the necessary degree of integration and synergism, making it governable on the basis of simple guidelines, such as the «competence principle» or the «exception principle» apt to free the responsible summit from onerous direct coordinative interventions vis-à-vis the subordinate level, it is possible to superimpose on the network, and insert in it, a range of organizational instruments, already proved from the theoretical viewpoint, capable of focalizing the activities conducted on predetermined institutional objectives.

For example, the Theory of the

NET STRUCTURE - ILLUSTRATION

Fig. 2



Games proposes, among others, the «non-cooperative» game, known as the «prisoner's dilemma».

The game permits to identify and analyze the problems of non-cooperative «social» aggregation and, in many cases, to find the relevant corrective measures.

At fig.3, a simple example of the game shows how individuals A and B, active in a hypothetical structure, although potentially in a position to integrate their efforts

and achieve the best result from the «social» (institutional) point of view, can be «naturally» induced to operate for sectorial aims, finally obtaining the less advantageous result, among the four deemed possible in our example, for the structure as a whole.

APPLICATIVE IDEAS

The examination of a possible model for the future Army, designed, at least in part, along the development trends of the present Capability Packages, can give an exemplifying idea of the potentialities and application methods of the core capability.

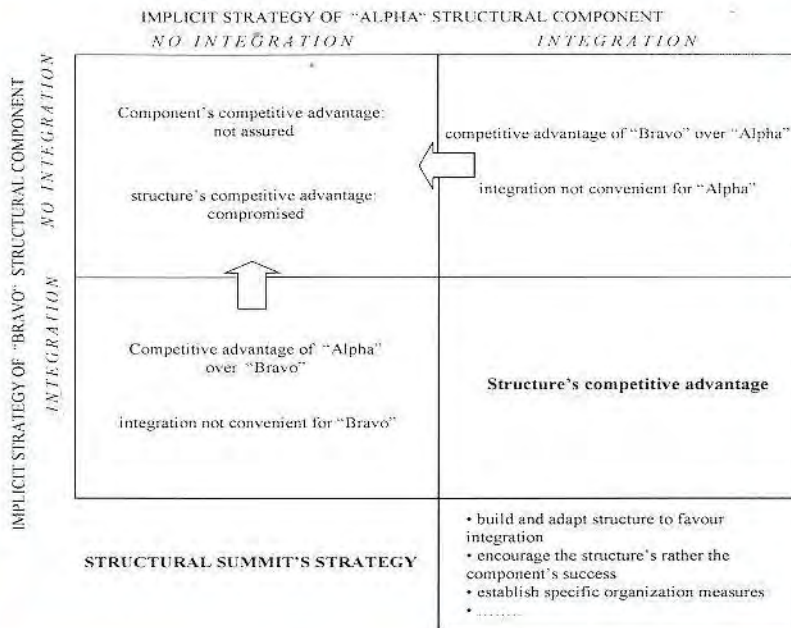
THE SUMMIT ORGANIZATION (partially implemented project)

Let us set, first of all, the Service in the joint background. As shown at fig.4 (present structure) the land forces, as conceived by the Army Staff, are prepared and managed by the Commander of the Forces (COMFOT). For employment they are transferred under the Joint



THE REASONS FOR STRUCTURAL INTEGRATION

Fig. 3



the Army Deputy Chief of Staff and the Forces' Commander; respectively in charge of the Army Staff and the Forces' Command.

The Army Deputy Chief of Staff is responsible for force planning, that he orients towards objectives representing complete operational capabilities. Within this framework, he outlines the basic operational planning at functional-module level, so as to be able to proceed to the evaluation, programming and preventive allocation of the forces in a dynamic and integrated context, taking into account both the needs connected with the construction of the forces and those related to the employment of the single functional modules that will have to compose them in the operations. In substance, also the operational planning - like the forces - is laid out in modular terms, and each module is coherently assemblable with others in order to make up a plan, just as the force modules are assembled to constitute a task force. The intent is to provide the operational planning with the necessary versatility to face contingencies that could develop, spurred by the events, in short periods of time and in only partially foreseeable terms.

The Forces' Commander carries out the Army Staff's programmes,

Operational Command (COI), through which the Defence Chief of Staff exercises the Operational Command (OPCOM) in operations; subsequently, organized in a Joint Task Force (JTF) - combined, if necessary, they are placed under a Force Commander (COMFOR), who is normally charged with the Operational Command in the operations zone. The objective's structure shows the possibilities provided by the network integration of the joint summit and must be read having as a reference the abovesaid characteristics and capabilities of such organizational scheme.

The Army general structure includes the Summit Organization and the Forces' Organization, which embody the necessary command and execution capabilities (fig.5).

The Commander of the Service is the Army Chief of Staff. He avails himself of a concentrated command capability, which is the starting point of the forces' hierarchical line in the preparation phase and finds its expression in the Summit Organization, both, with the Army Staff, in terms of evolutionary capability - i.e. studies

and plans - and, with the Forces Command, for what concerns the execution of the programmes and the management of the units.

The Forces' Organization instead, is structured on a distributed command capability, based on single pre-established inter-branch level, the major unit, and on regiment-level modules joined into functional Centres for their preparation. Fig.6 shows the two key figures of the Summit Organization,

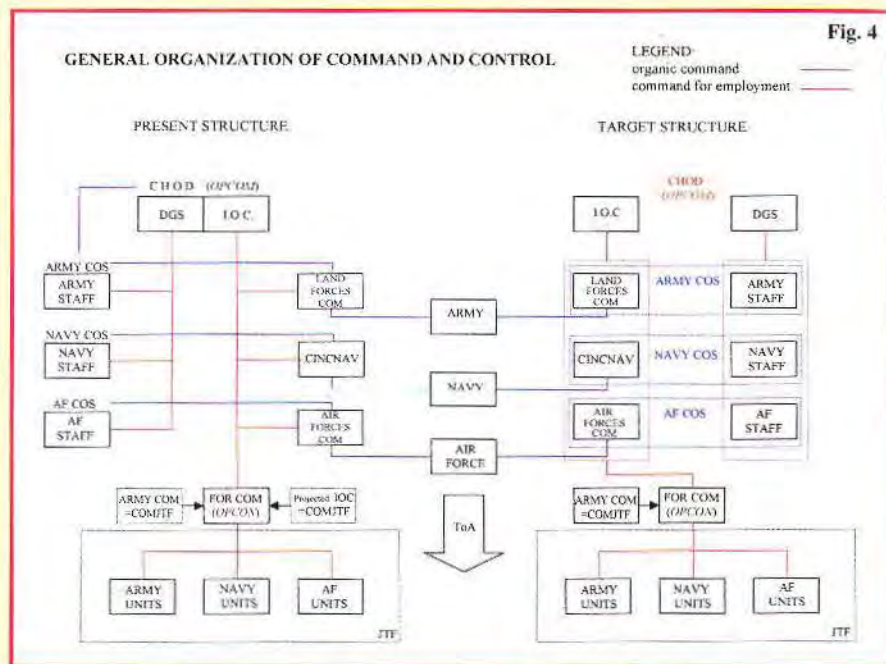


Branch or Speciality Training Centres, which are demultipliers of the organization line descending from the Force Command. They have no operational functions, but are responsible for the preparation of the modules for employment, also as regards the preparation of the blocks for their in-Theatre rotation in case of long operations.

THE SCHOOL-TRAINING SYSTEM (project under study)

The Army's School-Training system, under the supervision of the already mentioned TRADOC, consists of War College, Schools and Training Centres.

The integration between the School-Training System and the Operational Forces should guarantee a dynamic evolution of the military knowledge according to the scenarios of employment. The Training System, as a matter of fact, would directly share, through the subordinate units, the lessons learned by the latter in operations at all levels.



The organizational differences between the two systems would actually be acceptable, in a context of doctrinal quasi-stillness, as was that of the past 50 years, but, in a highly evolutionary situations like the present one, results in the isolation and impoverishment of the training function, marking its irreparable separation from the

operational function which it should instead sustain and foster.

DIVISION-LEVEL OPERATIONS (project under study)

In operations, a JTF, based on a major unit, operates either as a unit or by islands of conflict (fig.9) if the battlefield is fragmented and/or in case of peace-support operations.



employing the assigned resources, and is also responsible for the management of the entire land instrument. In particular, he has the task of collecting the modular planning into contingency plans for exercises or emergencies.

In substance, the Forces' Command is the structure through which the Army Chief of Staff exercises his full command on the Service.

Fig.7 exemplifies the organization structures adapted for the Summit and for the Forces.

THE FORCES IN GARRISON (project under study)

The Forces in garrison are organized, as we said, according to functional capabilities.

The Headquarters of major units,

variable-geometry formations capable of conducting operations in all the envisioned scenarios:

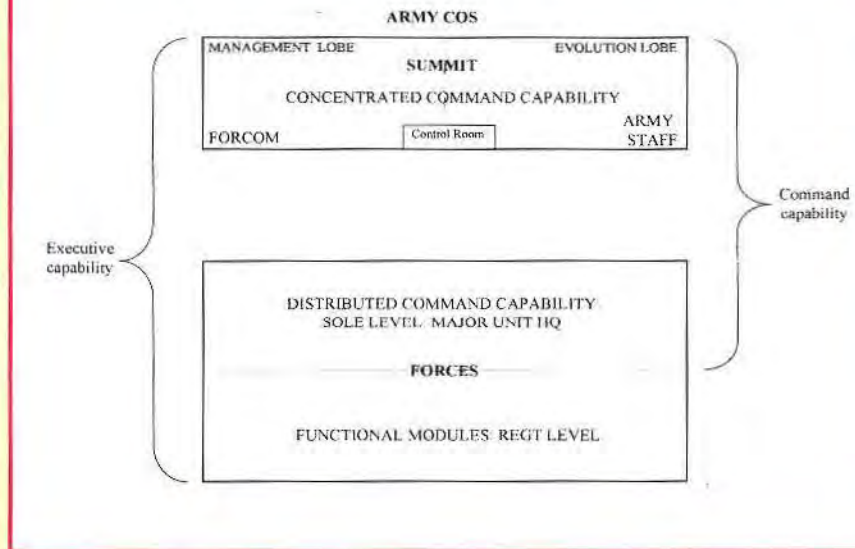
- consist of the Staffs only, organized into modules and relevant command and control systems, programmed for employment in simulation patterns;
- have no subordinate forces of their own, they take charge of the forces at the moment of the national ToA in operations or exercises;
- can set up the COMFOR of a JTF consisting mostly of land forces, possibly combined, working either as a unit or detaching their own modules to the Headquarters of subordinate units or to the COMFOR of another Nation, with a framework role, or of another Service in cases of prevalingly maritime or air missions (or operation phases).

The Headquarters of the major units are subordinate to the Command of the Forces. Their training at staff level is planned and coordinated by the Centre for Doctrine and Training (TRADOC-type organization), on the basis of the special directives issued by the Summit of the Service.

The modularity of the organization structure of the land instrument could be fully implemented by the year 2010. This is one of the most important consequences of the application of the principles expounded, and marks the final overcoming of the logic based on the concept of Capability Packages organized by macro-missions (Projection, Reaction, Control of the Territory). The transition to the concept of multipurpose formations, fully suited to fit into a network structure, closes also the era of the major units with a pre-constituted organization, by branch and speciality (Alpini, Bersaglieri, Reconnaissance, Armour, Mechanized etc.). Branches and specialities, as a matter of fact, will characterize only the functional components, and will find their place at a level comparable to that of today's Regiments.

GENERAL STRUCTURE OF THE ARMY

Fig. 5



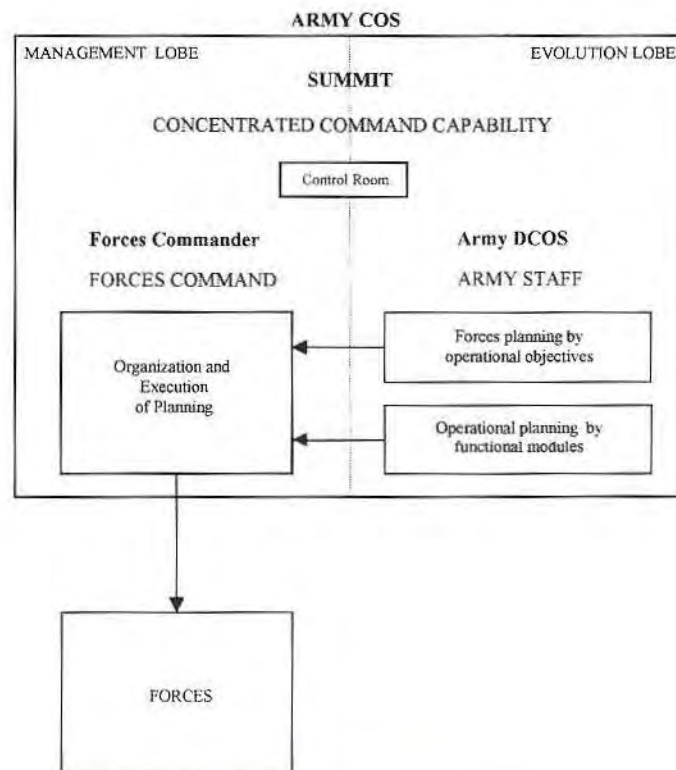
Purpose of these reforms is to give the forces the versatility necessary to face contingencies which, spurred by the events, could develop

within very short periods and in only partially foreseeable terms.

As shown at fig.8, the functional components are subordinate to the

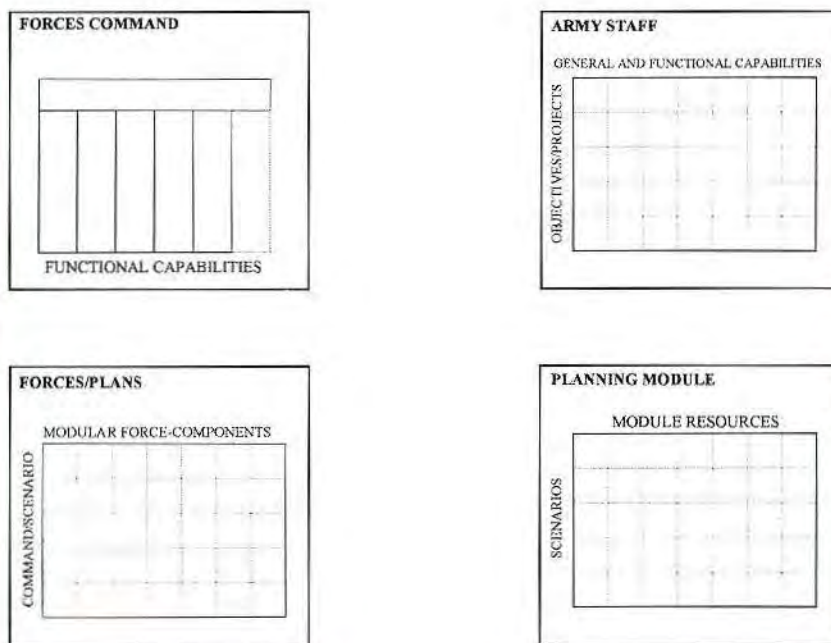
SUMMIT OF THE ARMY

Fig. 6



ORGANIZATIONAL STRUCTURE

Fig. 7



Particularly, in the latter instance, each island of conflict is assigned a task force suited, for quality and quantity, to the specific tasks.

The task force Hq. of each island consists of a major unit module, detached from the major unit Hq., one or more basic-branch regt Hq. modules and one or more modules of tactical-support regt Headquarters.

COMFOR, i.e. the major unit Hq., operates according to the concept of the network command capability, which envisages:

- subdivision of the Command into a section in support to the Commander and in several complete modules (i.e. G1, G2, G3, G4 etc.);
- establishment of a single Command Post, spread on the territory - since its various models are located in each island, together with the task-force Commanders - but virtually integrated into an INTRANET-type network (ubiquity);
- availability, at each island-

terminal of the supporting C4I System, of a complete replica of the Commander's software and hardware, with real-time net updating (availability of information);

- conduct of integrated operations carried out by the master (attribution of control), coinciding with the Commander's support section, located at the terminal of the island most exposed to the manoeuvre (reversibility). The concept outlined, which at present is only a theoretical reference model, to be closely examined and tested, should offer the following main advantages;
- ensure the highest probability of survival to COMFOR, without having to provide for substitute Commands. The command-and-control capability in operations is a primary resource for success, and therefore represents a critical vulnerability, especially in a context such as the present, characterized by growing risks in the C2 warfare sector;
- minimize the burdens in terms of personnel and support to the Command (logistic, security, administration, etc.), and of resources in general, through their transparency vis-à-vis each knot and the capability of carrying out a dynamic designation of control;
- permit the best integration of the manoeuvre, meant as a synergic employment of resources, particularly in fragmented-type situations;
- enable the major-unit Commander (operational level) to carry out his unifying functions, also on the plane of the sensitivity to the tactical situation and the direct management of the personnel in operations, in a natural and creative manner. This will permit him to remain close to the «fire line» also in critical moments, without renouncing his full capability of command and control;
- guarantee the adhesion of the major unit Hq. and of its C4I



capabilities to all subordinate units, also during the conduct phase;

- sustain the integration of forces from other Nations into the framework major unit, thanks to the detachment of the mentioned command modules.

LOGISTICS

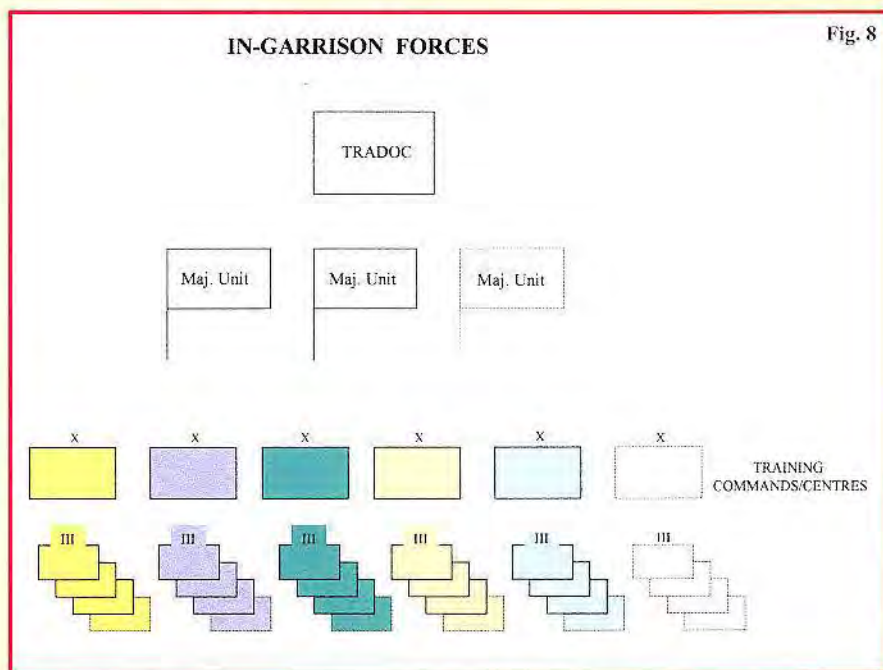
(project partially realized, already discussed more exhaustively in a previous article)

In the last year, especially after the most recent operational experiences, Logistics has gone through a significant streamlining process.

The reference logistic concept, approved at the end of 1997, and now on the way to a gradual implementation, marks the transition to a modular logistics, resolutely oriented towards the projection and support of forces in operations outside the borders. It is centred on the preventive planning and development of activities, conducted by centralized organizations, organically subordinate to a technical command-system, but under the operational control of the Commanders of the tactical formations supported.

In particular, the concept envisages the reorganization of the resources available according to the Great Base model, destined to support the projection of the Forces outside the borders, and their sustenance in peace-support and crisis-management operations, as well as to establish the interface structure between Support Logistics - which operates on the national territory under the responsibility of the Logistic Inspector - and the in-Theatre Adherence Logistics, which is in the sphere of the Force Commander.

Initially the Great Base would have an essentially «virtual» character, having been realized through the concentration of resources and capabilities which were formerly spread over a large area of southern Italy. Later on it



could also assume a physical form, in order to exploit to the utmost the savings deriving from the centralization of materials and assets and to optimize the performance of the support units.

Another cornerstone of the concept is the peculiar Command and Control Organization, which is the real essence of the working mechanisms of the Great Base and of the Adherence Logistics in the Operations Zone. This organization permits to centralize control and to manage resources and capabilities, as well as prepare a rational Programme of Logistic Activities, centred on the logistic responsibility

of the Command above the one which conducts the in-Theatre operations - a completely new interpretation of the «home delivery» logistics - as well as on the development of essentially preventive interventions.

Finally, the specialization of the Logistic Organizations permits to effectively deal with the complexity of the Support organization and the cost of its deployment, through a marked professionalism of the men and units entrusted with the operation of logistics at all levels.

The reference logistic-concept enables the Service to take on, if necessary, the role of lead Nation



for the management of the logistic activities, among other Countries involved in a multinational operation.

Organic logistic assets, very limited in size, are allocated only at regiment level. The executive logistic organizations of the Adherence Logistics are concentrated at major-unit level, and organized by specialistic modules, (maintenance, transport, etc.), which can be assembled into task forces and are capable of integrating the modular elements released by the Support-Logistics organizations.

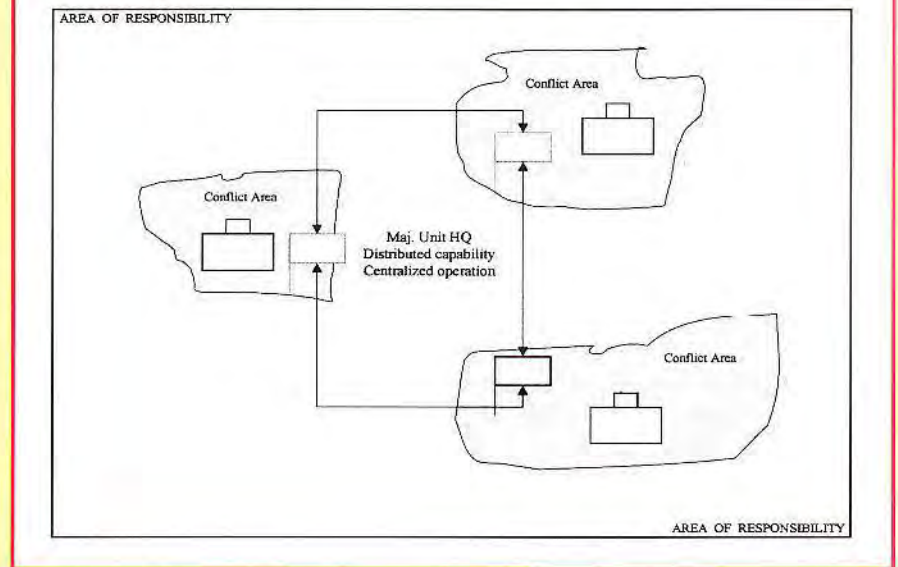
Support, on the national territory, is provided by a limited number of «Support» logistic formations, joined in multifunctional organizations and specialized centres with areal responsibilities, integrated through a fully computerized Command and Control system.

The outline of logistics in

operations, marked by high flexibility and dynamism, reflects the features of fragmented

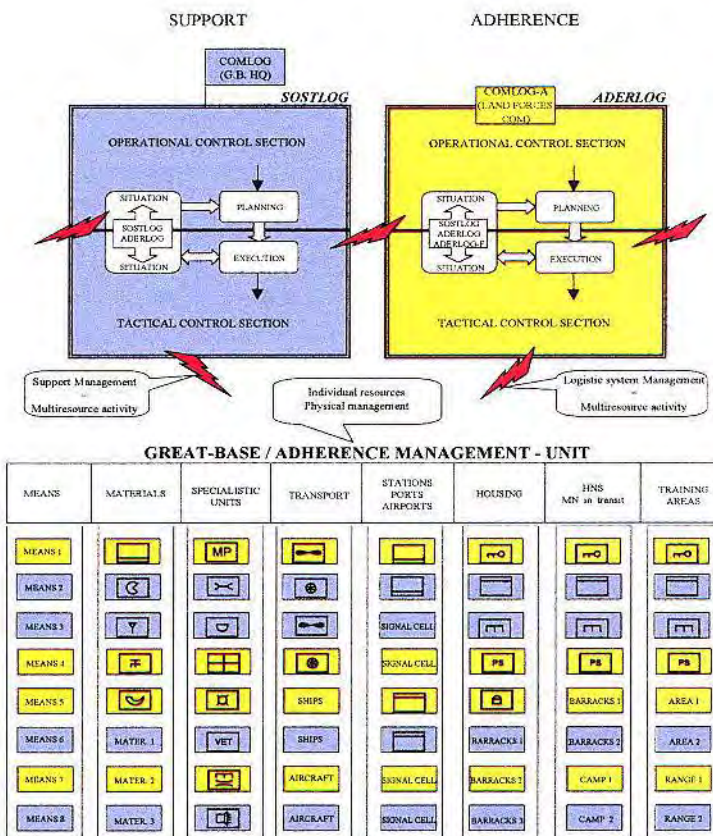
FORCES IN OPERATIONS

Fig. 9



MANAGEMENT OF THE RESOURCES

Fig. 10



Real time

operations. It envisages:

- transparency and visibility of the available and necessary logistic resources and capabilities - from the Home Country to the engagement areas - which are prerequisites for the highest efficiency of the support;
- tactical mobility higher than logistic mobility, which means relieving the forces of the burden and attrition derived from dragging along their own support;
- dynamic planning of meeting points between forces and supports, in reconditioning islands - variable and flexible according to the situation - where activities of resupplying, replacement of unserviceable materials, reconfiguration of forces, etc. are carried out with field equipment.
- close-net, real-time centralized control of the «islands» (location of the assets), and of the forces (where the requirements are). Islands and forces are continuously moving and mutually transparent: the centralized control is necessary in order to be able to plan «on the road» the site of the meeting point and the activity to be conducted within it, automatically and



operational employment, both in planning/constituting the forces and in planning/conducting the operations.

Taking for granted the need of an exceptional improvement in the quality of the human component, the problem, as we have seen, could be tackled and solved, in prospect, at structure level, where by «structure» we mean a complex modular whole of men and relational rules that bind them, dynamically organizable on the basis of the entrusted mission.

The network structure appears to be the most suitable model of organization for the attainment of the core capability.

□

efficiently, at the moment of a meeting that, to avoid becoming an occasion of vulnerability, must necessarily be «swift and secret».

Fig. 10 and 11 show the schemes of the net structures considered for resource management, respectively within the Great Base and the logistic organizations of the in-Theatre Adherence, and for the use/employment of the resources in the Operations Zone.

intent of maximizing its effectiveness, through the orientation of all the available resources towards the

**Lt. Colonel,
Section Chief, Plans Office,
Army General Staff*

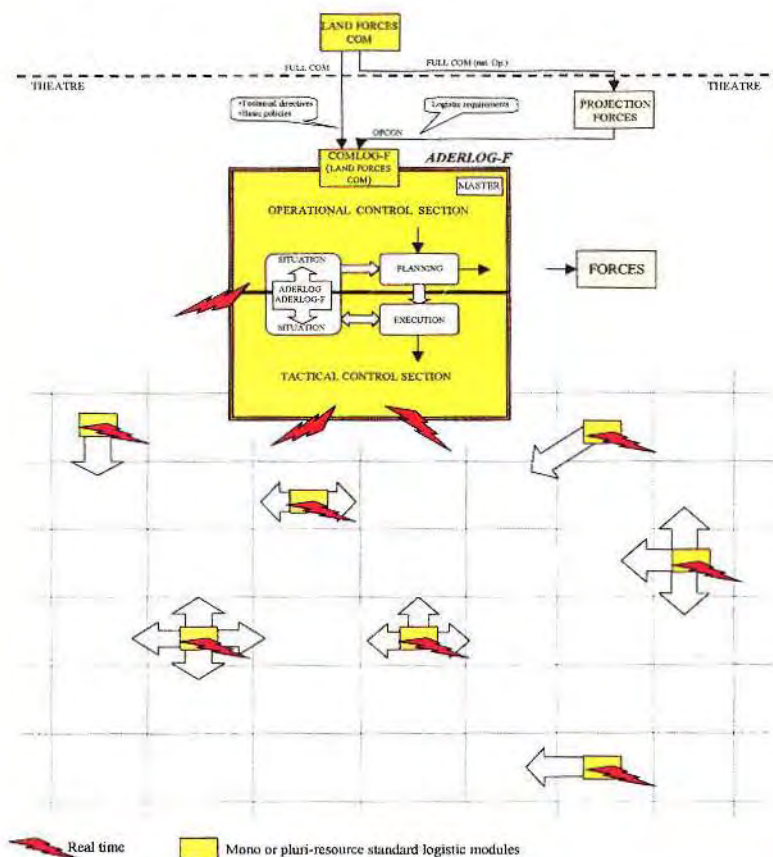
CONCLUSIONS

In conclusion, the results of the studies and researches conducted so far have led to the conviction that to run after scenarios marked by repeated and not always foreseeable changes is neither productive nor compatible with the institutional reality of the Army. It would be necessary to invert the order of causality of the capability-scenarios, but this is a hypothetical prerogative of the political level only.

On the part of the military, especially when resources are scarce, it is necessary to concentrate on the core-capability, consisting of the ability to promptly adapt the instrument's configuration to the changing requirements, with the

EMPLOYMENT OF THE IN-THEATRE LOGISTIC RESOURCES

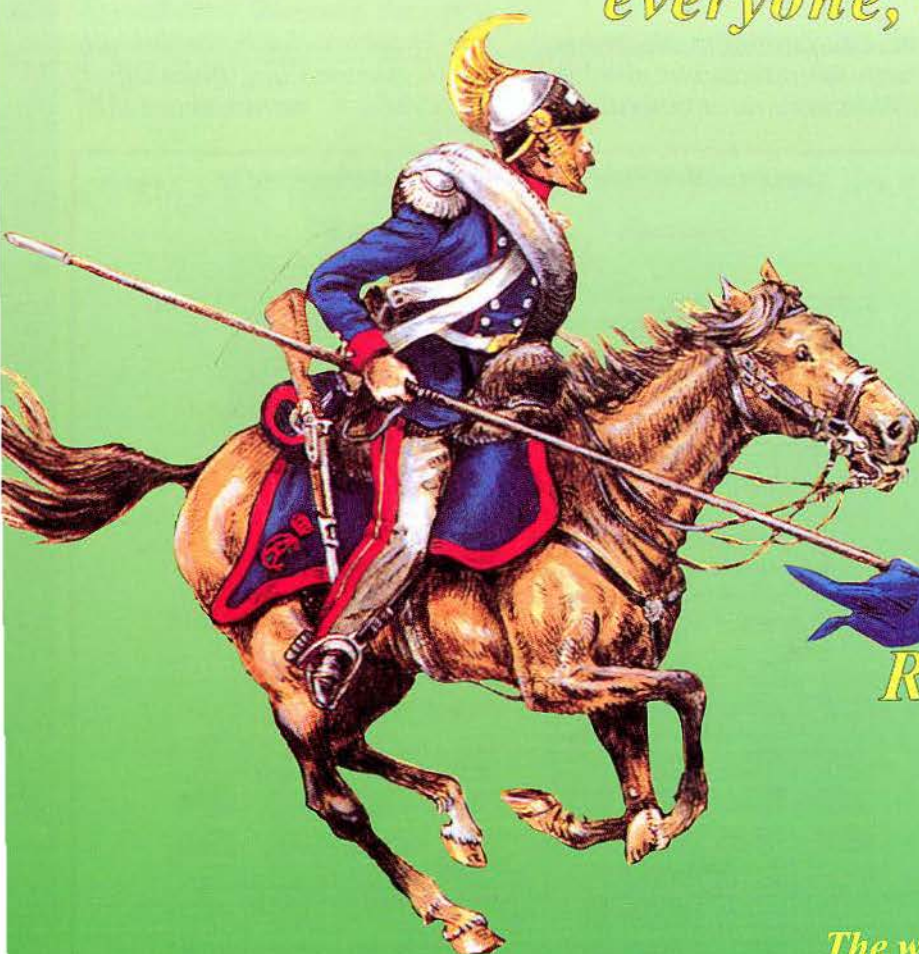
Fig. 11



Contribute

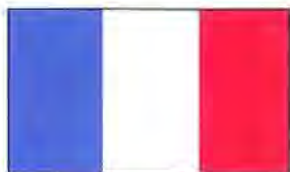
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everyone, in the spirit of
pluralism and
constructive
debate
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twelve typewritten pages*

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La nouvelle OTAN, **par Vittorio Barbati (p. 2).**

Dans la perspective d'un ultérieur élargissement de l'OTAN vers l'Est, l'Auteur analyse les facteurs principales que pourront causer une complète refondation de l'Alliance: régime politique, ressources, collocation géostratégique, programmes militaires, capacité de l'industrie, niveau de recherche pure et de recherche appliquée, rôle de l'Europe Unie. Cet article termine avec une comparaison parallèle entre le potentiel militaire des États-Unis et de l'Europe en cours de standardisation.

Norvège. La nouvelle Armée de Terre. Interview avec le **Majeur-Général Sverre Økland,** **par Enrico Magnani (p. 10).**

De 1993 l'Armée de Terre norvégienne a subi une réduction du 50% en termes de force et d'unités. On compte de réduire aussi les frais ordinaires d'entretien en faveur de nouveaux programmes d'investissements. Les expériences dans le domaine de l'OTAN ont produit de déterminantes innovations pour ce qui concerne l'organisation, l'instruction, les moyens et la doctrine militaire. La Norvège ne renoncera pas au service obligatoire pour ses citoyens masculins ayants entre 19 et 44 ans (et le service volontaire pour les femmes). Les liens avec l'Alliance Atlantique et la stricte collaboration avec les États-Unis, le Royaume-Uni, l'Hollande, l'Allemagne et les Pays scandinaves restants inchangés.

Danemark. La nouvelle Armée de

Terre. Entrevue au Général **Christian Hvidt,**

par Enrico Magnani (p. 18).

L'Armée de Terre danoise, la première à faire partie d'un Corps d'Armée internationale, a en cours une profonde transformation qu'on achevera en 1999. On conservera le service et l'organisation des riservistes que permet de tripler le personnel aux armes avec le passage de la tenue de paix à la tenue de campagne. Tous les rôles sont ouverts aussi aux femmes. La Défense danoise peut aussi compter sur la Garde Nationale, avec ses 6 000 hommes, tous des volontaires.

Un nouveau ordre **international. Globalisation et** **sociétés multiethniques,** **par Ornella Rota (p. 26).**

Des sociétés multiethniques et multiculturelles sont en train de s'affirmer un peu partout dans un planète dirigé vers une globalisation économique et sociale. De ça dérivent des problèmes de très grande portée concernant la sûreté et la paix. Cet article comprend aussi plusieurs fortes témoignages dignes de foi de représentants de deux grandes Nations, qui sont l'expression la plus grande de la société multiraciale: les Ambassadeurs des États-Unis et de l'Inde.

La planification opérationnelle **par Pier Paolo Lunelli (p. 32).**

Le recours au jeu des échecs sert pour expliquer des idées importantes telles quelles le centre de gravité, les lignes opérationnelles, les objectifs, les forces déplacées («assets»), les conceptions («assumptions»), la planification. Cet article, le deuxième de la série, trace le tableau des interconnexions doctrinales existantes parmi les points décisifs, les phases et les suites opérationnelles, la planification de contingence et le point culminant. Des exemples

concrets servent à éclaircir ce traité.

Les paquets de capacité et la **formation,** **par Ivan Felice Resce et Sabato** **Errico (p. 50).**

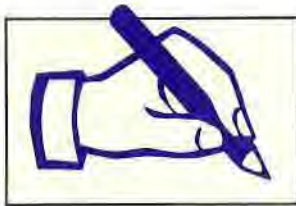
Ce travail parle de la possible évolution de l'organisation des écoles et de l'instruction militaire, une composante de support essentielle de l'instrument opérationnel. Tout ça a le but de réaliser une synergie d'efforts que permet de créer une liaison logique, à l'intérieur du système, parmi les procédés d'emploi, la doctrine et les capacités de formation.

Les paquets de capacité et la **logistique,** **par Sauro Baistrocchi (p. 66).**

Cet article décrit l'action d'adaptation de la logistique aux changées conditions géostratégiques. L'«idée logistique de référence» représente la condition nécessaire théorique du changement dans lequel l'idée de base est celle de la modification de la gravitation du support, non plus enracinée au territoire nationale et à une menace prédefinie, mais reconfigurer dynamiquement, selon la mentalité et la capacité, selon la projection et l'alimentation de formations employées pour des missions à l'étranger.

Armée de Terre. Projet 2000. **Planification: la première année,** **par Ivan Felice Resce (p. 80).**

L'article décrit les objectives du processus de planification: apprêter le plutôt possible un ensemble de forces au moins à niveau de Division pour contribuer efficacement à la sûreté de l'Europe; constituer des forces de manoeuvre caractérisées par une flexibilité d'emploi, une «leadership», une diffuse cohésion intérieure, une intégrabilité pour



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ce qui concerne les systèmes d'opération que constituent la «task force» pour l'emploi; rendre plus efficace les unités d'exploration, l'Artillerie et le Génie; rendre plus puissante la logistique de protection. Il est un projet ambitieux qu'on peut réaliser dans le 2000.

Ligne d'évolution des paquets de capacités. Les panoramas d'emploi après l'an 2010, par Sauro Baistrocchi (p. 92).

L'article trace un tableau, en donnent aussi des hypothèses de panoramas d'après l'an 2000, de quelque possible directrice d'approfondissement pour le développement des forces de terre nationales. Le projet, en considèrent les nombreuses disponibilités des ressources, est centré sur les soi-disantes «supercapacités», qui consistent en la possibilité d'adapter la configuration de l'instrument militaire aux exigences changeantes.



Die neue NATO, von Vittorio Barbati (s. 2). Angesichts einer weiteren NATO-Osterweiterung werden die wichtigsten Faktoren untersucht, die sozusagen zu einer radikalen Neugründung der Allianz führen können. Dies betrifft das politische System, die Ressourcen, die geostrategische Einordnung, Militärprogramme, industrielle Kapazität, Niveau der Grundlagen- und der

angewandten Forschung sowie die Rolle des Vereinten Europa. Die Arbeit findet ihren Abschluß in einer Gegenüberstellung des militärischen Potentials der Vereinigten Staaten und dem sich in einem Standardisierungsprozeß befindlichen Potential Europas.

Norwegen. Die Neuen Streitkräfte. Interview mit Generalmajor Sverre Økland, von Enrico Magnani (s. 10).

Seit 1993 sind die norwegischen Streitkräfte um 50% reduziert worden, und zwar sowohl die Mannstärke als auch die Einheiten. Es ist beabsichtigt, auch die ordentlichen und die Instandsetzungsausgaben zugunsten neuer Investitionsprogramme zu reduzieren. Die Erfahrungen im Bereich der NATO haben zu entscheidenden Innovationen im Bereich der Organisation, der Ausbildung, der Mittel und der Doktrin geführt. Norwegen wird nicht auf die Wehrpflicht für seine männlichen Staatsbürger zwischen 19 und 44 Jahren verzichten; Frauen ist ein freiwilliger Dienst anheimgestellt. Unverändert bleiben schließlich die Verbindungen zur atlantischen Allianz sowie die enge Zusammenarbeit mit den USA, dem Vereinigten Königreich, den Niederlanden, Deutschland und den skandinavischen Ländern.

Dänemark. Das neue Heer. Interview mit General Christian Hvidt, von Enrico Magnani (s. 18).

Die dänischen Streitkräfte, die als erste Teil eines internationalen Verbandes waren, befinden sich in einem tiefen Transformationsprozeß, der 1999 seinen vorläufigen Abschluß finden soll. Wehrpflicht und Reserve, die die Verdreifachung der Zahl an Personen unter Waffen beim Übergang vom Friedens- zum

Kriegszustand ermöglicht, bleiben erhalten.

Alle Laufbahnen stehen auch den Frauen offen. Die dänische Verteidigung kann im übrigen auf die 6000 Freiwillige zählende Nationalgarde zurückgreifen.

Eine neuen Weltordnung. Globalisierung und multiethnische Gesellschaften, von Ornella Rota (s. 26).

Überall auf unserem Planeten, der auf dem Wege einer ökonomischen und sozialen Globalisierung ist, entstehen pluriethnische und multikulturelle Gesellschaften. Daraus leitet sich eine Problematik erheblichen Ausmaßes ab, die den Themenbereich Sicherheit und Frieden betreffen. Den Artikel bereichern aussagekräftige Zeugnisse von hochstehenden Repräsentanten zweier großer Nationen, die selbst Inbegriff multirassischer Gesellschaften sind: es sind die Botschafter der Vereinigten Staaten und Indiens.

Operative Planung (2. Teil), von Pier Paolo Lunelli (s. 32).

Der Rückgriff auf das Schachspiel dient dazu, wichtige Begriffe wie das Gravitationszentrum, die Strategien, die Ziele, die verteilten Kräfte (assets), die Konzepte (assumptions) sowie die Planung zu erklären.

Dieser zweite Teil des Aufsatzes zeigt die theoretischen Zusammenhänge zwischen den ausschlaggebenden Punkten auf, sowie die operativen Phasen und deren Reihenfolge, die jeweils anzuwendende Planung und den Höhepunkt.

Einige konkrete Beispiele dienen zur Klärung der Abhandlung.

«Fähigkeitspakete» und Ausbildung, von Ivan Felice Resce und Sabato Errico (s. 50). Die Arbeit erläutert die mögliche Entwicklung der militärischen

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schul- und ausbildungsmäßigen Organisation, einer grundlegenden Komponente operativer Mittel. Das Ziel ist es, eine Synergie aller Bestrebungen zu erreichen, die eine logische Verbindung innerhalb des Systems zwischen den Verfahren der Anwendung, der Lehre und der Ausbildungsfähigkeiten schafft.

«Fähigkeitspakete» und Logistik, von Sauro Baistrocchi (s. 66).

Der Artikel beschreibt die Anpassung der Logistik an die veränderten geostrategischen Verhältnisse. Das «logistische Bezugskonzept» stellt die theoretische Voraussetzung des Wandels dar, in der die Grundidee darin besteht, den Schwerpunkt der Unterstützungselemente (support) zu modifizieren, die nun nicht mehr auf das eigene Territorium beschränkt und gegen eine vorher bestimmbare Bedrohung gerichtet sind. Vielmehr werden sie, was Mentalität und Kapazität betrifft, für die Projektierung und die Unterhaltung von Formationen, die «out of border» operieren, in dynamischer Weise neu gegliedert.

Das Heer - Projekt 2000.

Planungsjahr, von Ivan Felice Resce (s. 80).

Dieser Aufsatz beschreibt die Zielvorgaben des Planungsprozesses, und zwar: mittelfristig einen Verband mindestens von Divisionsstärke bereitzustellen, um wirkungsvoll zur europäischen Sicherheit beitragen zu können; Manöverkräfte zu schaffen, die sich durch flexible Einsatzbereitschaft, Führungsqualität (*leadership*), durch eine weit verbreitete innere Kohäsion auszeichnen, sowie durch die Fähigkeit, sich im Rahmen der operativen Systeme, aus denen die Einsatzbereitschaft

(*task force*) besteht, zu integrieren; die Effektivität von Aufklärung, Artillerie und Pionierkräften zu erhöhen; die zugehörige Logistik deutlich zu verstärken. Es handelt sich um ein ehrgeiziges Projekt, das aber bis zum Jahr 2000 verwirklicht werden kann.

Entwicklungslinien der «Fähigkeitspakete». Szenarien für ihre Anwendung nach 2010, von Sauro Baistrocchi (s. 92).

In diesem Aufsatz werden einige mögliche Hauptentwicklungslinien der nationalen Landstreitkräfte - als hypothetisches Szenario nach 2010 - vertieft.

Angesichts der heutigen Mittelknappheit wird in diesem Projekt der Schwerpunkt auf die sogenannten «Super-Fähigkeiten» gelegt, die in der Möglichkeit bestehen, die Konfiguration des Militärs den veränderlichen Bedingungen anzupassen.



La nueva OTAN, de Vittorio Barbatì (p. 2).

Para otro ampliamento hacia Este de la OTAN, se analizan los principales factores que podrían llevar a una definitiva refundación de la Alianza; regime político, recursos, colocación geoestratégica, programas militares, capacidad industrial, nivel de busca verdadera, rol de la Europa Unida. El trabajo de concluye con una comparación entre el potencial militar de los Estados Unidos y lo europeo que está para estandarizarse.

Norvega. El nuevo Ejército. Entrevista al Mayor-General

Sverre Økland, de Enrico Magnani (p. 10).

Desde 1993 el Ejército de Norvega ha sido reducido del 50% en terminos de fuerza y de unidad. Se piensa en reducir también los gastos ordinarios y de mantenimiento para los nuevos programas de insumo. Las experiencias de la OTAN han traído a decisivas innovaciones en el campo de la organización, del adiestramiento, de los medios y de la doctrina. La Norvega no renunciará al servicio militar obligatorio para los hombres desde los 19 hasta los 44 años (servicio voluntario para las mujeres). Se quedan inmutados los atados con la Alianza Atlantica, así como la arrada colaboración con los Estados Unidos, el Reyno Unido, la Holanda, La Alemania y lo Paises Escandinavos.

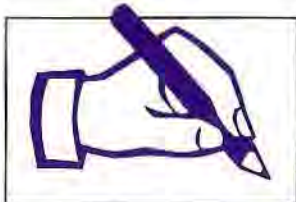
Danimarca. El nuevo Ejército. Entrevista al General Christian Hvidt,

de Enrico Magnani (p. 18).

El Ejército danés, el primero a tomar parte de un Cuerpo de Armada internacional, tiene en acto una profunda transformación que será terminada en 1999. Será conservada el servicio militar y la organización de la reserva que consente de triplicar el personal a las armas con el tránsito del aseto de paz a lo de guerra. Todos los roles son abiertos también a las mujeres. La Defensa danés puede contar en la Guardia Nacional, con 6000 hombres, todos voluntarios.

Un nuevo orden internacional. Globalización y sociedades multiétnicas, de Ornella Rota (p. 26).

Por doquiera se van a afirmar sociedades multiétnicas y multiculturales en un planeta que va hacia una globalización económica y social. De esto derivan problemas de gran



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magnitud que invierten el tema de la seguridad y de la paz. El artículo es enriquecido de fuertes declaraciones de importantes representantes de dos grandes Países que son la máxima expresión de la sociedad multiracial: los embajadores de Estados Unidos y de India.

La planificación operativa de Pier Paolo Lunelli (p. 32).

El recurso al juego de ajedrez es necesario para explicar conceptos importantes como el centro de gravedad, las líneas operativas, los objetivos las fuerzas dispuestas («assets»), las concepciones («assumptions»), la planificación. El artículo, segundo de la serie, traza las interconexiones doctrinales existentes entre los puntos definitivos, las fases y las secuencias operativas, la planificación de contingencia y el punto cumbre. Algunos ejemplos concretos sirven para aclarar la exposición.

Los paquetes de capacidad y de formación, de Ivan Felice Resce y Sabato Errico (p. 50).

El trabajo ilustra la posible evolución de la organización escolar y de adiestramiento, una componente de soporte esencial del instrumento operativo. El todo para realizar una sinergia esfuerzos que favorezca un enlace lógico en el sistema, entre los procedimientos de empleo, la doctrina y la capacidad formativa.

Los paquetes de capacidad y la logística, de Sauro Baistrocchi (p. 66).

El Artículo habla de la acción de adaptación de la logística a las mutadas condiciones geoestratégicas. El «concepto logístico de referencia» representa el presupuesto teórico del campo en el que la idea fundamental es la de la modificación de la gravitación del soporte, ya no anclado al territorio nacional y

a una amenaza predefinida, sino reconfigurado dinamicamente, por mentalidad y capacidad, para la proyección y alimentación de formaciones en operaciones al extranjero.

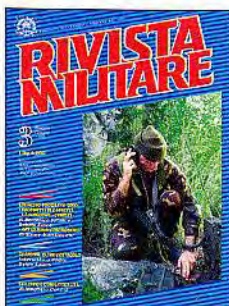
Ejército. Proyecto 2000.

Planificación año primero, de Ivan Felice Resce (p. 80).

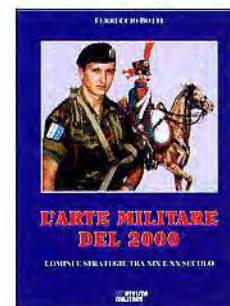
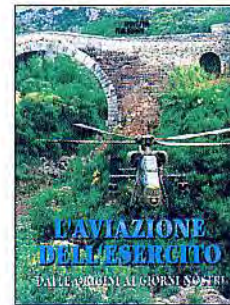
El artículo describe los objetivos del proceso de planificación: aprontar en el medio término un complejo de fuerzas por lo menos de nivel divisional para contribuir con eficacia a la seguridad europea; constituir fuerzas de maniobra caracterizadas de flexibilidad de empleo, «leadership», difundido acuerdo interno, integrabilidad en los ámbitos de los sistemas operativos constituyentes la «task force» para el empleo; hacer más eficaces las unidades explorantes, la Artillería y el Genio, potenciar la logística de adherencia. Un proyecto ambicioso que puede ser realizado dentro del 2000.

Líneas de evolución de los paquetes de capacidades. Los escenarios de empleo post-2010, de Sauro Baistrocchi (p. 92).

El artículo subraya con hipótesis de escenario post-2010, algunas posibles directrices de aprovechamiento para el desarrollo de las fuerzas terrestres nacionales. El proyecto teniendo presente las escasas disponibilidades de los recursos, gravita en las así llamadas «supercapacidades», que consisten en la posibilidad de adaptar la configuración del medio militar para variables exigencias.



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